

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر مارس



1 (A) Choose the correct answer :

(5 marks)

- Water vapor that is present in air changes into when it hits a cold water bottle.
a. gas state b. liquid water c. steam d. juice
- When a liquid is heated, it and become less dense and
a. expands – heavier. b. contracts – lighter.
c. expands – lighter. d. contracts – heavier.
- The large salt lake in Turkey is dried up due to the increase in the rate of process.
a. melting b. freezing c. evaporation d. condensation
- Wind helps in transporting water through the water cycle by carrying
a. sand grains. b. small rocks. c. plant leaves. d. water vapor.

(B) Give a reason for the following :

Formation of clouds in the sky.

.....

.....

2 (A) Write the scientific term of each of the following :

(5 marks)

- The cycle that involves the continuous movement of water from different water bodies to the atmosphere then falling back to Earth in form of rain, sleet or snow. (.....)
- It is a form of evaporation that takes place through the stomata which is found in plant leaves. (.....)
- It is caused when air warmed by the solar radiation rises and then replaced by cooler air that flows from nearby areas. (.....)
- It is the process in which water falls on Earth in the form of rain, sleet, snow or hail. (.....)

(B) What happens to ...?

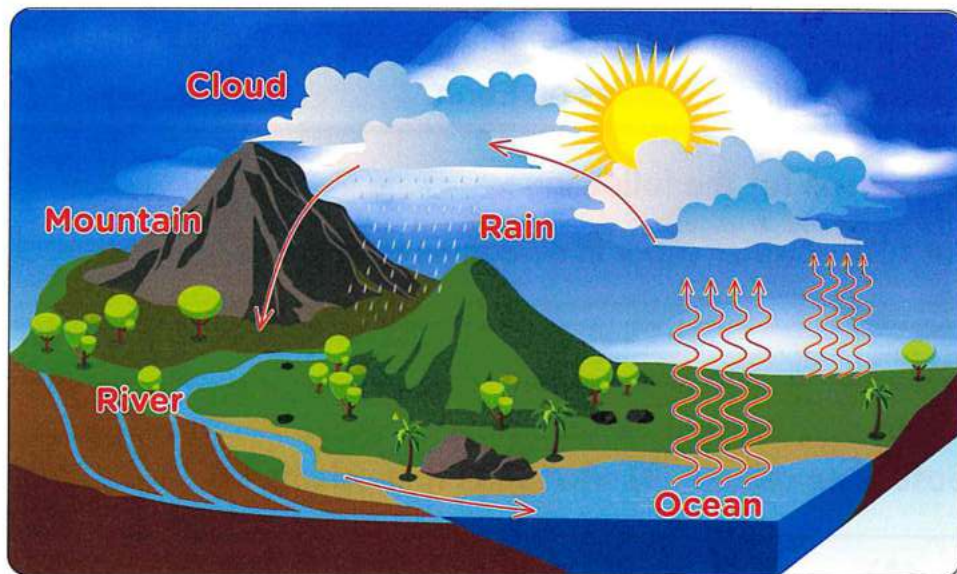
The air temperature if there is no wind on Earth.

.....

.....

3 (A) Put (✓) or (X) :**(5 marks)**

1. As air is warmed by the Sun, the air falls down. ()
2. Rains fall and collect in oceans by the effect of gravity force. ()
3. Water comes out from stomata to the air in the form of water vapor. ()
4. In the water cycle, the step that follows condensation process is runoff. ()

(B) Look at the following figure, then choose the correct answer :

1. The rain falling on the mountain is a form of
 a. cloud. b. precipitation. c. evaporation. d. condensation.
2. The rain on the mountain runs into the and goes to the ocean.
 a. Sun b. river c. ocean d. groundwater
3. When the Sun heats up the water in the ocean, it
 a. runs off. b. condenses. c. precipitates. d. evaporates.

1 (A) Put (✓) or (X) :

(5 marks)

1. Water cycle plays an important role in determining the weather conditions. ()
2. Convection is the way of transferring heat through liquids and solids. ()
3. The amount of sunlight that falls on Earth's surface doesn't change. ()
4. The inclination of the sun rays that fall on Earth's surface affects the weather of different areas on Earth. ()

(B) Give a reason for the following :

About 10% of water vapor in air comes from plants.

.....

.....

2 (A) Choose from column (B) what suits it in column (A) :

(5 marks)

(A)	(B)
1. Condensation	a. water collects in streams, rivers or oceans.
2. Evaporation	b. water falls to Earth's surface.
3. Precipitation	c. the heated water evaporates.
4. Collection	d. water vapor rises up to the atmosphere and then cools into water droplets.
	e. water flows a long Earth's surface.

1. 2. 3. 4.

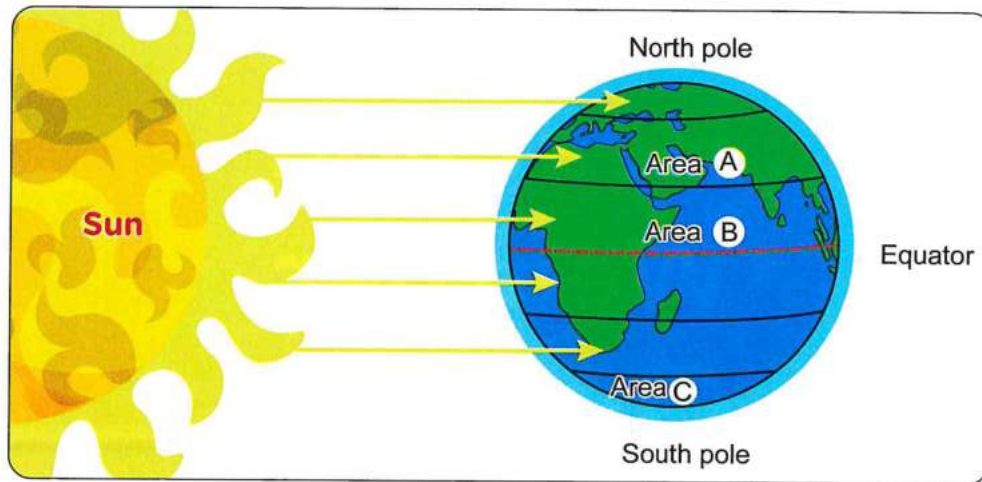
(B) What happens to ...?

The snow when sunlight falls on it.

.....

.....

3 (A) Look at the following figure, then answer the following questions : (5 marks)



a. Choose :

1. The area is very hot because the sun rays fall perpendicular on it.

(A – B – C)

2. The sun rays fall on area (A).

(perpendicular – semi-inclined – very inclined)

b. Put (✓) or (X) :

1. The areas (B) and (C) have higher temperature than area (A). ()

2. At area (C), the weather is very cold because the sun rays fall very inclined on it. ()

(B) Cross out the odd words :

1. Snow – Rain – Hail – Water vapor.

(.....)

2. Evaporation – Transpiration – Condensation – Melting.

(.....)

Model Exam on Concept (3.1)

Total mark

15

1 (A) Complete the following sentences using the words below :

(5 marks)

(solar – water reservoirs – rain – density)

1. The are storage locations of water on Earth.
2. The amount of energy that reaches Earth affects the rate of evaporation process in the water cycle.
3. Cold water has more than warm water, so it moves under the warm water.
4. When warm air contains enough water vapor, it loses this water in the form of

(B) Give a reason for the following :

Hot air moves upward above cold air.

.....

2 (A) Correct the underlined words :

(5 marks)

1. The heat of the Sun transfers from space to Earth's atmosphere by convection. (.....)
2. Deserts are formed by the effect of moist air. (.....)
3. Flamingos migrate to the large salt lake in Turkey when the weather is very cold there. (.....)
4. Evaporation of water means that liquid water changes into ice. (.....)

(B) What happens if ...?

You cover some leaves in a plant with a plastic bag, then leave the plant in the direct sunlight for a while.

.....

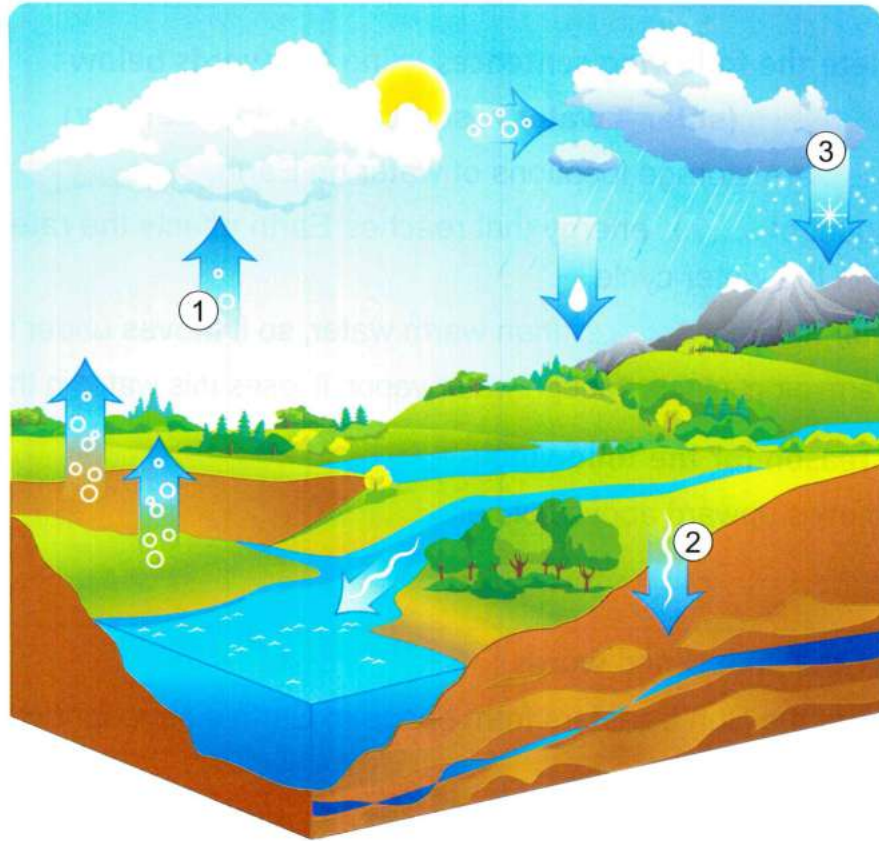
3 (A) Choose from column (B) what suits it in column (A) :

(5 marks)

(A)	(B)
1. Condensation	a. falling of snow in an area.
2. Evaporation	b. formation of fog over a field in the morning.
3. Precipitation	c. formation of a glacier in an area.
4. Runoff	d. drying of a shallow lake.
	e. flowing of river's water into a sea.

1.
2.
3.
4.

(B) Look at the following figure, then put (✓) or (X) :



1. Arrow number ① indicates lose of thermal energy. ()
2. Arrow number ② indicates the effect of the gravitational force on water. ()
3. Arrow number ③ represents precipitation precess. ()

Model Exam 1

on Concept (3.2)

Total mark

15

1 (A) Choose the correct answer :

(5 marks)

1. The density of hot humid air is that of cold dry air.
a. more than b. equal to c. less than d. similar to
2. Heat transfers by convection in
a. liquids only. b. gases only.
c. solids and gases. d. liquids and gases.
3. The tool that is used to measure the speed of precipitation is
a. barometer. b. thermometer. c. weather radar. d. anemometer.
4. Drought affects the following, except
a. animals. b. plants. c. people. d. buildings.

(B) Give a reason for the following :

Meteorologists need to observe landforms in an area.

.....
.....

2 (A) Put (✓) or (x) :

(5 marks)

1. When rain doesn't fall for a long period of time, soil may get dry and plants may die. ()
2. By increasing the temperature of air, its density increases. ()
3. Sand cools down in a shorter time than sea water during nighttime. ()
4. The properties of the atmosphere at the top of the mountain and at its bottom are similar. ()

(B) What happens to ...?

The atmospheric pressure, as we move up toward the top of a mountain.

.....
.....

3 (A) Write the scientific term of each of the following :

(5 marks)

1. The side of the mountain ranges at coastal regions that faces the coast. (.....)

2. The device that is used to measure atmospheric pressure. (.....)
3. It is the weight of the air above an area. (.....)
4. It is a natural phenomenon in which very strong winds blow up dust that reduce the visibility during driving cars. (.....)

(B) Study the following two figures, in which paper spiral and talcum powder are placed above a lighted bulb, then choose the correct answer :

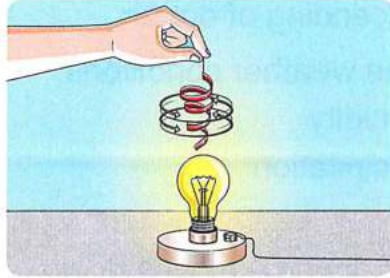


Figure (1)

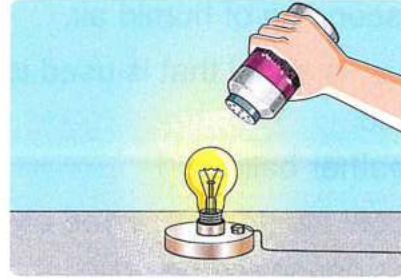


Figure (2)

1. Air molecules around the bulb spread out and become less dense, so they move up
 - a. in figure (1) only.
 - b. in figure (2) only.
 - c. in figures (1) and (2).
 - d. when air molecules are cooled.
2. Convection currents can be observed
 - a. when the bulb is turned off.
 - b. in figures (1) and (2).
 - c. in figure (1) only.
 - d. in figure (2) only.

1 (A) Choose the correct answer :

(5 marks)

- In rain shadow phenomenon, the dry side of a coastal mountain range is formed due to
 a. rising of humid air. b. rising of dry air.
 c. descending of humid air. d. descending of dry air.
- is a tool that is used to express the weather conditions.
 a. Wind b. Humidity
 c. Weather balloon d. Precipitation
- The cold air is and always
 a. less dense – moves up. b. less dense – moves down.
 c. more dense – moves up. d. more dense – moves down.
- happens due to the shortage of water in an area for a long period of time.
 a. Snowfall b. Sandstorm c. Flooding d. Drought

(B) What happens to ...?

The air density, as we move down toward the bottom of a mountain.

.....

2 (A) Write the scientific term for each of the following :

(5 marks)

- The process that happens after the condensation of water vapor in the atmosphere causing rain falls at the wet side of a coastal mountain range. (.....)
- The science that studies the weather conditions. (.....)
- The horizontal movement of air in the atmosphere. (.....)
- It is a natural phenomenon in which extreme dry and hot weather affect an area for a long period of time. (.....)

(B) Give a reason for the following :

Hot air moves up, while cold air moves down.

.....

- 3 (A) By using the words below, complete the following diagram which describe how the rain shadow phenomenon occurs :** (5 marks)

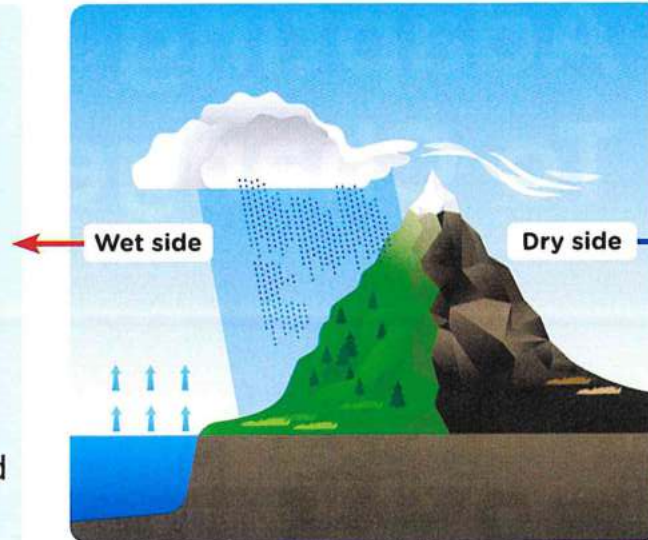
(Air descends – Air cools – Air warms – Air rises)

1. Hot and humid air encounters a coastal mountain range.

2.

3.

4. Water vapour condenses and precipitation occur.



5.

6.

7. Air dries the land.

(B) Put (✓) or (X) :

1. Reusing water is a useful way to irrigate crops in desert farms.

()

2. Convection currents are related to horizontal movement of air.

()

Model Exam on Theme (3)

Total mark

15

1 (A) Choose the correct answer :

(5 marks)

1. Fresh water stored underground in the form of groundwater by the effect of
a. condensation. b. electricity. c. gravity. d. evaporation.
2. Water vapor in the atmosphere can condense and form
a. air. b. clouds. c. sunlight. d. wind.
3. The form of evaporation process that takes place from the leaves of plants is called
a. transpiration. b. collection. c. melting. d. freezing.
4. The barometer is used to measure
a. object's mass. b. object's length.
c. air temperature. d. atmospheric pressure.

(B) Give a reason for the following :

Formation of fog in the early morning.

.....

2 (A) Put (✓) or (X) :

(5 marks)

1. Unequal heating of Earth between the poles and the equator generates wind. ()
2. Falling of hail in coolest regions is an example of evaporation process. ()
3. Cold air rises above hot air. ()
4. Heavy rain may cause flooding. ()

(B) What happens to ...?

The air density as we move down toward the bottom of a mountain.

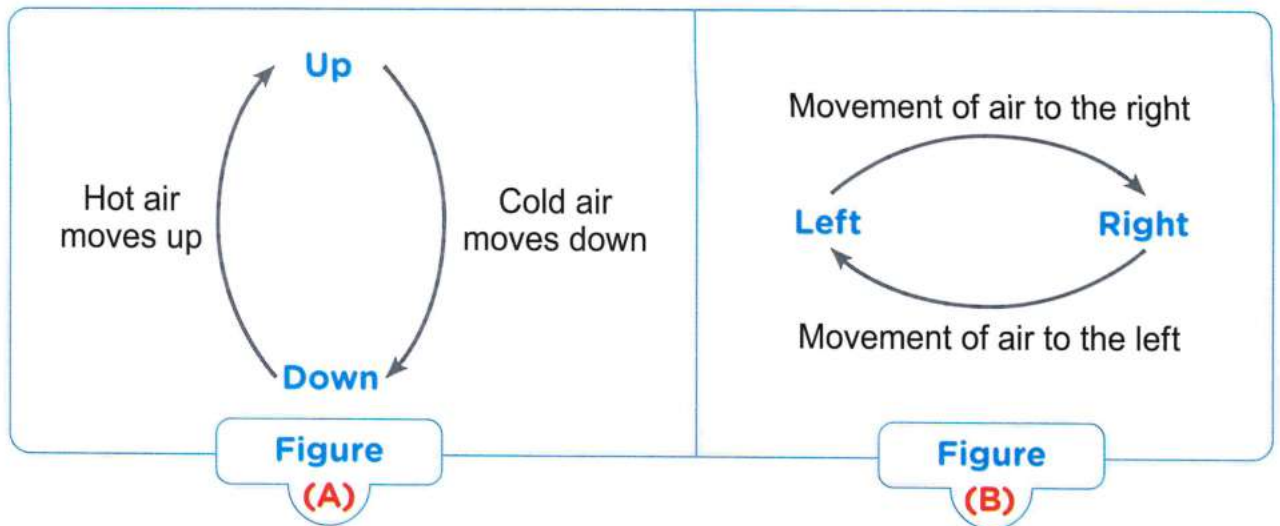
.....

3 (A) Write the scientific term of each of the following :

(5 marks)

1. The science that studies the weather conditions. (.....)
2. It is the weight of the air above an area. (.....)
3. They are the places of storing water on the Earth. (.....)
4. It is the step in which water flows along Earth's surface into the river and then into the ocean or sea. (.....)

(B) Look at the following figure, then choose the correct answer below :



1. Figure (A) can explain in which the movement of air is up and down.
(wind – air current)
2. Figure (B) can explain in which the movement of air is right and left.
(wind – air current)

March Tests

Model 1

Total mark

15

1 (A) Choose the correct answer :

(5 marks)

- The density of cold dry air is that of hot humid air.
a. equal to b. similar to c. less than d. more than
- Floods may occur as a result of and
a. gentle rain – melting of snow.
b. gentle rain – freezing of water.
c. heavy rain – sudden melting of snow.
d. heavy rain – little evaporation of water.
- Precipitation process in the water cycle is usually followed by two steps which are and
a. runoff – evaporation. b. collection – melting.
c. runoff – collection. d. melting – freezing.
- Heat transfers through and gases by
a. liquids – radiation. b. liquids – convection.
c. solids – convection. d. solids – radiation.

(B) Give a reason for the following :

When air is heated, it expands.

.....

2 (A) Write the scientific term of each of the following :

(5 marks)

- It is a natural phenomenon in which extreme dry and hot weather affect an area for a long period of time. (.....)
- The scientist who studies the atmosphere to understand Earth's weather. (.....)
- It is a type of evaporation that takes place through the stomata on the plant's leaves. (.....)
- It is the continuous movement of water among different water reservoirs. (.....)

(B) What happens to ...?

The atmospheric pressure, as we move up toward the top of a mountain.

.....

3 (A) Put (✓) or (X) :**(5 marks)**

1. Rain gauge is used to measure the amount of rain in a certain area. ()
2. Mapping data means representing data about weather conditions on a map. ()
3. During the water cycle, condensation of water vapor occurs after precipitation process. ()
4. Deserts are formed by the effect of moist air. ()

(B) Mention two harms of sandstorms.

.....

.....

Model 2**Total mark**15**1 (A) Complete the following sentences :****(5 marks)**

1. Convection currents move in direction.
2. At night, the sand of the seashore cools off than the sea water.
3. Dry air causes the formation of large areas of around Earth's surface.
4. Formation of fog is due to the of water vapor on a field in early morning.

(B) Choose from column (B) what suits it in column (A) :

Devices	Uses
1. Anemometer	a. measuring the atmospheric pressure.
2. Weather radar	b. measuring the speed of wind.
	c. measuring the speed and intensity of precipitation.

1.

2.

2 (A) Put (✓) or (X) :**(5 marks)**

1. Although flooding is harmful, it also has some benefits. ()
2. The air becomes more dense at the top of a mountain compared to the bottom of this mountain. ()
3. States of water change when water gains or loses energy. ()
4. Due to radiation currents, warm water moves above cold water. ()

(B) Cross out the odd word :

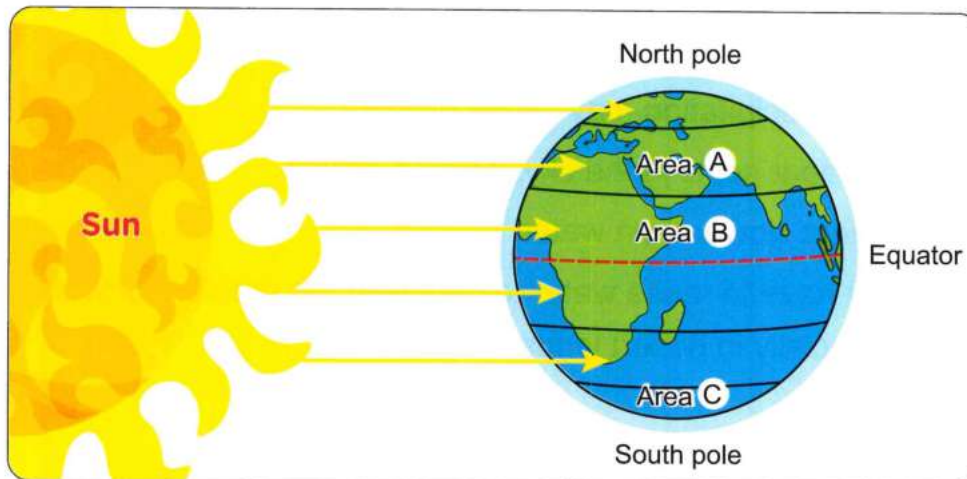
1. Snow – Rain – Hail – Water vapor. (.....)
2. Evaporation – Transpiration – Condensation – Melting. (.....)

3 (A) Write the scientific term of each of the following :

(5 marks)

1. The force that pulls big and heavy water droplets toward the ground causing precipitation. (.....)
2. The phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range. (.....)
3. It is the science of studying and predicting the weather. (.....)
4. It is the increase in the flow of water over the edges of riverbanks and onto the land around a river. (.....)

(B) Look at the following figure, then choose the correct answer :



1. The weather in area (A) is (hot – warm – very cold)
2. The sun rays fall perpendicular on area (A – B – C)

Model 3

Total mark

15

1 (A) Complete the following sentences :

(5 marks)

1. The horizontal movement of air is called
2. The change of matter from gas state to liquid state is known as
3. is used to measure the temperature.
4. Flamingos feed on that found in the shallow water of salt lake in Turkey.

(B) Give a reason for the following :

Moving down of glaciers from the top of a mountain to its foot.

.....

2 (A) Write the scientific term of each of the following :**(5 marks)**

1. A process in which matter changes from liquid state to gas state. (.....)
2. The amount of force that air exerts on its surroundings. (.....)
3. A natural phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. (.....)
4. A process in which water falls on Earth in the form of rain, sleet, snow or hail. (.....)

(B) Mention the importance of :

Barometer :

3 (A) Put (✓) or (X) :**(5 marks)**

1. The too much precipitation may cause drought. ()
2. When water vapor cools in the sky, it forms clouds. ()
3. Sand loses heat slower than water. ()
4. Farmers may have to reuse water to deal with the problem of water shortage especially in desert lands. ()

(B) Define :

Convection :

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر مارس



1 A) Complete the following sentence:

- The three main processes which are responsible for the movement of water through the water bodies on Earth are, and

B) Give a reason for:

- 1 The formation of clouds in the sky.

.....

- 2 The temperature in the desert is high during the day and low at night.

.....

2 A) Correct the underlined word:

- Leakage of water into groundwater reservoirs is due to the action of condensation.
(.....)

B) What is meant by ...?

- 1 Water cycle.

.....

- 2 Convection

.....

3 A) Write the scientific term:

- It is the increase in the flow of water over the edges of riverbanks and onto the land around a river.
(.....)

B) What happens ...?

- 1 To the snow when sunlight falls on it.

.....

- 2 When extreme dry and hot weather affects an area for a long period of time.

.....

4 A) Choose the correct answer:

- At the top of the mountain, the atmospheric pressure
a) is high b) is low c) is moderate d) vanishes

B) Answer the following questions:

- 1 Explain** why meteorologists use tools to carry measuring instruments high into the atmosphere.

..... .

- 2** What are the results that could happen if there is no wind on Earth?

..... .

1 A) Complete the following sentence:

- At the bottom of a mountain, the air density is than that at its top.

B) What happens...?

- 1 To the level of water in a lake when the rate of evaporation increases.
.....

- 2 When strong winds blow up dust from dry areas.
.....

2 A) Put (✓) or (X) in front of the following sentence:

- About 10% of water vapor in the air comes from transpiration of plants. ()

B) Give a reason for:

- 1 Hot air is upward above cold air.
.....

- 2 Flooding is more dangerous if the ground is frozen.
.....

3 A) Choose the correct answer:

- The tool that detects the intensity and speed of precipitation and tracks thunderstorms is the

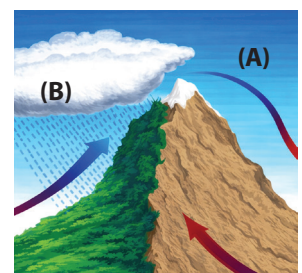
a) weather radar b) rain gauge c) barometer d) anemometer

B) Answer the following questions:

- 1 Mention the factors that determine the wind direction
.....
.....

2 Look at the opposite figure, then complete:

The opposite figure represented the
phenomenon, the side (A) is the side
due to the



4 A) Write the scientific term:

- A device used to measure the atmospheric pressure. (.....)

B) Compare between each of the following:

1 Runoff & Precipitation.

Runoff	Precipitation
.....	
.....	
.....	

2 Climate & Weather.

Climate	Weather
.....	
.....	
.....	

1 A) Put (✓) or (X) in front of the following sentence:

- The thermometer is used to measure the temperature. ()

B) What happens ...?

- 1 To the water droplets in clouds when the air is cold enough.
.....

- 2 When putting the paper spiral above the lamp that is on.
.....

2 A) Choose the correct answer:

- The water molecules lose thermal energy during and processes.
 - a) evaporation – melting
 - b) condensation – freezing
 - c) respiration – freezing
 - d) respiration - condensation

B) Mention:

- 1 The harms of floods.
.....
.....

- 2 The challenges that farmers face in the farming desert.
.....

3 A) Write the scientific term:

- It is a process that takes place through the stomata which are found in plant leaves to get rid of excess water. (.....)

B) Give a reason for:

- 1 Flamingos migrate to places with warm weather.
.....

- 2 The weather in the area near the equator is very hot.
.....

4 A) Complete the following sentence:

- Lakes may dry due to process.

B) Answer the following questions:

- 1** What are the steps that meteorologists take to predict weather?

.....

.....

- 2** What are the harms of sandstorms?

(List 3 only)

.....

.....

1 A) Put (✓) or (X) in front of the following sentence:

- When air is heated, its density increases due to its molecules contracting. ()

B) Compare between:

- 1 Evaporation process and Condensation process.

Evaporation process	Condensation process
.....	
.....	
.....	

- 2 Humidity and Atmospheric pressure.

Humidity	Atmospheric pressure
.....	
.....	
.....	

2 A) Choose the correct answer:

- are used to carry measuring instruments into the atmosphere to measure the weather conditions.
 - a) Thermometers
 - b) Barometers
 - c) Weather balloons
 - d) Weather radars

B) Give a reason for:

- 1 Falling ice crystals and water droplets found in clouds return to the Earth's surface.
.....
- 2 Ice forming at the top of the mountains.
.....

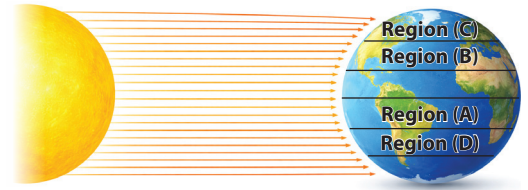
3 A) Write the scientific term:

- They are storage locations of water on Earth including oceans, lakes, soil, and others.
(.....)

B) Answer the following questions:

1 Look at the opposite figure, then complete:

The region (C) has weather
due to on the Earth's
surface. While the evaporation process in
regions (.....) and (.....) is moderate.



2 What is the relationship between convection and condensation?

.....
.....

4 A) Complete the following sentence:

- The rotation of convection currents causes the formation of and

B) What happens when ...?

1 The amount of water vapor in the air increases.

.....

2 When the sun's rays fall semi-inclined on the Earth's surface in the area at the north and south of the equator.

.....

1 A) Correct the underlined word:

- The most important source that drives water cycle is the wind. (.....)

B) Give a reason for:

- 1 The total amount of water on Earth doesn't change.

.....

- 2 The temperatures vary around the world.

.....

2 A) Choose the correct answer:

- affect weather and climate.
 - a) Mountains
 - b) Soil types
 - c) Water bodies
 - d) All of the previous

B) Answer the following questions:

- 1 The water cycle is very important for all living organisms on the Earth's surface. Explain.

.....

- 2 What is meant by "drought"?

.....

3 A) Put (✓) or (X) in front of the following sentence:

- Floods may occur as a result of heavy rain and the sudden melting of snow. ()

B) What happens ...?

- 1 To equal amount of water and sand when they are exposed to the thermal energy of the sun in daylight.

.....

- 2 When dust accumulates on solar panels.

.....

4 A) Complete the following sentence:

- Wind is formed when rises up and is replaced by that flows from nearby areas.

B) What is the importance of ...?

- 1** Anemometer.

.....

- 2** Weather maps.

.....

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1 A) Complete the following sentence:

- The three main processes which are responsible for the movement of water through the water bodies on Earth are **evaporation**, **condensation**, and **precipitation**.

B) Give a reason for:

- 1 The formation of clouds in the sky.
 - Due to the condensation of water vapor into water droplets that attach to particles of dust or smoke in the air.
- 2 The temperature in the desert is high during the day and low at night.
 - Because the sand of the desert heats up quickly and cools off quickly.

2 A) Correct the underlined word:

- Leakage of water into groundwater reservoirs is due to the action of condensation.
(gravity)

B) What is meant by ...?

- 1 Water cycle.
 - It is the continuous movement of water among different water reservoirs.
- 2 Convection
 - It is the process in which heat transfers in liquids and gases, where hot molecules rise upward while colder molecules fall down.

3 A) Write the scientific term:

- It is the increase in the flow of water over the edges of riverbanks and onto the land around a river.
(Flood)

B) What happens ...?

- 1 To the snow when sunlight falls on it.
 - The snow will melt and change into liquid water.
- 2 When extreme dry and hot weather affects an area for a long period of time.
 - Drought occurs.

4 A) Choose the correct answer:

- At the top of the mountain, the atmospheric pressure
a) is high **b) is low** c) is moderate d) vanishes

B) Answer the following questions:

- 1 Explain** why meteorologists use tools to carry measuring instruments high into the atmosphere.
 - To measure the weather conditions from different altitudes.
- 2** What are the results that could happen if there is no wind on Earth?
 - Areas near the equator will become extremely hot, and the poles will freeze.

1 A) Complete the following sentence:

- At the bottom of a mountain, the air density is **higher** than that at its top.

B) What happens...?

- 1 To the level of water in a lake when the rate of evaporation increases.
 - The level of water will decrease.
- 2 When strong winds blow up dust from dry areas.
 - Sandstorm occurs.

2 A) Put (✓) or (X) in front of the following sentence:

- About 10% of water vapor in the air comes from transpiration of plants. (✓)

B) Give a reason for:

- 1 Hot air is upward above cold air.
 - Because hot air has less density, so it rises upward, while cold air has more density, so it falls down.
- 2 Flooding is more dangerous if the ground is frozen.
 - Because the ground can't absorb the water.

3 A) Choose the correct answer:

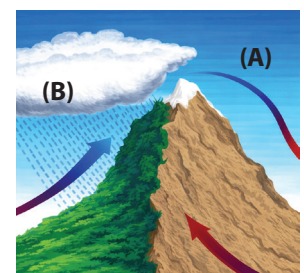
- The tool that detects the intensity and speed of precipitation and tracks thunderstorms is the
 - a) weather radar b) rain gauge c) barometer d) anemometer

B) Answer the following questions:

- 1 Mention the factors that determine the wind direction
 - 1- The amount of solar radiation that reaches Earth.
 - 2- The rotation of Earth.

2 Look at the opposite figure, then complete:

The opposite figure represented the **rain shadow** phenomenon, the side (A) is the **dry** side due to the **descending of dry air**.



4 A) Write the scientific term:

- A device used to measure the atmospheric pressure.

(Barometer)

B) Compare between each of the following:

1 Runoff & Precipitation.

Runoff	Precipitation
It is the flow of water along the Earth's surface into a river and then into the ocean or sea.	It is the process in which water falls on Earth in the form of rain, sleet, snow, or hail.

2 Climate & Weather.

Climate	Weather
The expected state of the weather over a long period of time (a season or a year).	The expected state of the weather over a short period of time (a day or a week).

1 A) Put (✓) or (X) in front of the following sentence:

- The thermometer is used to measure the temperature.

(✓)

B) What happens ...?

- 1 To the water droplets in clouds when the air is cold enough.
 - The water droplets change into ice crystals that fall to the Earth's surface in the form of snow.
- 2 When putting the paper spiral above the lamp that is on.
 - The paper spins.

2 A) Choose the correct answer:

- The water molecules lose thermal energy during and processes.

a) evaporation – melting	b) condensation – freezing
c) respiration – freezing	d) respiration - condensation

B) Mention:

- 1 The harms of floods.
 - Damaging buildings by moving or breaking them.
 - Death of people and animals.
 - Harming the economy.
- 2 The challenges that farmers face in the farming desert.
 - The extreme hot and dry weather causes evaporation of more water than that which falls by precipitation.

3 A) Write the scientific term:

- It is a process that takes place through the stomata which are found in plant leaves to get rid of excess water.

(Transpiration)

B) Give a reason for:

- 1 Flamingos migrate to places with warm weather.
 - To reproduce.
- 2 The weather in the area near the equator is very hot.
 - Because the sun's rays fall perpendicularly on the Earth's surface, giving a high effect of heat.

4 A) Complete the following sentence:

- Lakes may dry due to **evaporation** process.

B) Answer the following questions:

1 What are the steps that meteorologists take to predict weather?

- Collecting data.
- Analyzing data.
- Putting all the data together.

2 What are the harms of sandstorms?

(List 3 only)

- Dust reduces visibility.
- Dust fills up irrigation canals, so the water quality decreases.
- Dust harms the eyes and the respiratory system of humans.

1 A) Put (✓) or (X) in front of the following sentence:

- When air is heated, its density increases due to its molecules contracting.

(X)

B) Compare between:

- 1 Evaporation process and Condensation process.

Evaporation process	Condensation process
It is the process in which water changes from a liquid state to a gas state.	It is the process in which water changes from a gas state to a liquid state.

- 2 Humidity and Atmospheric pressure.

Humidity	Atmospheric pressure
It is the measure of how much water vapor is present in the air.	The weight of the air above a certain area.

2 A) Choose the correct answer:

- are used to carry measuring instruments into the atmosphere to measure the weather conditions.

- a) Thermometers
- b) Barometers
- c) Weather balloons
- d) Weather radars

B) Give a reason for:

- 1 Falling ice crystals and water droplets found in clouds return to the Earth's surface.
 - Because they become too heavy and fall in the form of rain due to gravity.
- 2 Ice forming at the top of the mountains.
 - Because the temperature decreases as we go to the top of a mountain.

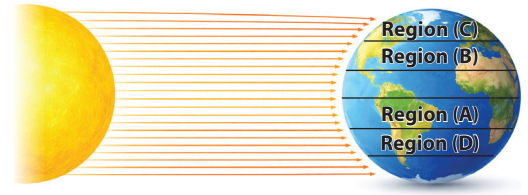
3 A) Write the scientific term:

- They are storage locations of water on Earth including oceans, lakes, soil, and others.
(Water reservoirs)

B) Answer the following questions:

1 Look at the opposite figure, then complete:

The region (C) has **very cold** weather due to **the sun's rays fall very inclined** on the Earth's surface. While the evaporation process in regions (B) and (D) is moderate.



2 What is the relationship between convection and condensation?

- Convection causes warm air containing water vapor to rise and when the rising air loses its heat, cold water vapor changes into droplets in the form of clouds.

4 A) Complete the following sentence:

- The rotation of convection currents causes the formation of **wind** and **ocean currents**.

B) What happens when ...?

1 The amount of water vapor in the air increases.

- As the amount of water vapor in the atmosphere increases, the level of humidity increases.

2 When the sun's rays fall semi-inclined on the Earth's surface in the area at the north and south of the equator.

- The sun's rays are distributed on a large area giving low effect of heat, so the weather is warm.

1 A) Correct the underlined word:

- The most important source that drives water cycle is the wind.

(sun)

B) Give a reason for:

- 1 The total amount of water on Earth doesn't change.
 - Because it can be replaced through the water cycle.
- 2 The temperatures vary around the world.
 - Due to the unequal distribution of solar energy in each region of the world, which causes unequal heating of the air.

2 A) Choose the correct answer:

- affect weather and climate.
 - a) Mountains
 - b) Soil types
 - c) Water bodies
 - d) All of the previous

B) Answer the following questions:

- 1 The water cycle is very important for all living organisms on the Earth's surface. Explain.
 - Because it provides water for all living organisms and regulates weather on Earth.
- 2 What is meant by "drought"?
 - It is the shortage of water available for drinking and for growing crops.

3 A) Put (✓) or (X) in front of the following sentence:

- Floods may occur as a result of heavy rain and the sudden melting of snow.

(✓)

B) What happens ...?

- 1 To equal amount of water and sand when they are exposed to the thermal energy of the sun in daylight.
 - Sand heats up faster than water.
- 2 When dust accumulates on solar panels.
 - They stop generating energy.

4 A) Complete the following sentence:

- Wind is formed when **warm air** rises up and is replaced by **cold air** that flows from nearby areas.

B) What is the importance of ...?

- 1 Anemometer.
 - It is used to measure the wind speed.
- 2 Weather maps.
 - Mapping data of weather conditions and communicating information to other meteorologists and the public.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر مارس



Science Exam 1

1 A) Write the scientific term:

It is considered the main source of energy in the water cycle.

(.....)

B) Give reason for each of the following:

(1) Sandstorms have harmful effects on human health.



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(2) About 10% of the water vapor in the air comes from plants.



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(3) Formation of clouds in the sky.



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.....

(4) The weather in the area near the equator is hot.



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.....

2 A) Choose from the words bank:

At the top of the mountain

The same

Higher

Lower

(1) The air pressure is

(2) The temperature is

(3) The air density is

Explain your answer:

B) What happens..?

(1) The rate of evaporation of water in a lake increases.

(2) Placing cold water on top of hot water.

(3) Sand and water are exposed for a whole day to the sunlight.

3 A) Choose the correct answer:

- (1)  It is the transformation of water vapor into liquid water droplets in the air.
(a) Transpiration (b) Evaporation (c) Condensation (d) Melting
- (2) Oceans help improve the world's climate through
(a) Heat absorption. (b) Nitrogen gas absorption.
(c) Salt storage. (d) Water storage.

B) Mention the function of:

- (1) Barometer ►
- (2) Anemometer ►
- (3) Rain gauge ►
- (4) Weather radar ►

4 A) Complete the following sentences:

- (1) Water vapor condenses in the sky to form
- (2) Heavy rain for a long period of time may cause

B) How is energy transfer related to the water cycle?

-
-
-
-

B)  What elements shape local and regional weather changes surrounding you?

.....

.....

C)  **Define:**

(1) Reservoir

.....

.....

(2) Convection current

.....

.....

Science Exam 2

1 A) Choose the correct answer:

 Among the forms of precipitation

(a) Rain, hail, and snow.

(b) Sun, rain, and snow.

(c) Seas, rivers, and oceans.

(d) Mountains, valleys, and rivers.

B) **What happens..?**

(1) To the Atmospheric pressure as we move up toward the top of a mountain.

.....

(2) The sunlight falls on the snow.

.....

.....

(3) When water gains high heat energy.

.....

(4) When the weather is dry for a long time.

.....

$$\left(\begin{array}{c} \dots \end{array} \right)$$

.....

- (3) Explain meteorologist represents weather forecasts as probability ratios.



4

A) If a meteorologist wants to know. They should use.

If a meteorologist wants to know	They should use
(1) The speed of a tornado's winds.	▶
(2) Whether it rained more this summer or last summer.	▶
(3) The possible path of a hurricane.	▶
(4) The current atmospheric pressure.	▶

- (5) Where does the energy that drives convection currents come from?



B) Define:

(1) Convection ▶

(2) Density ▶

Science

Exam

3

1

A) Choose the correct answer:

The temperature may reach more than 50 degrees in Aswan in the summer. This reflects

(a) Humidity (b) Atmosphere (c) Weather (d) Climate

B) Give reason for each of the following:

- (1) Importance of condensation in the water cycle.
▶
 - (2)  Living organisms are considered water reservoirs on the Earth's surface.
▶
 - (3) The amount of water on Earth's surface doesn't change.
▶
▶
- c)** How does the amount of solar energy affect the transpiration rate of plant's leaves?
▶
▶

2 A) Complete the following:

Melting ice in an area can cause

B) Explain the scientific reason:

- (1) The hottest regions on Earth are in the middle area, while the coolest regions are at the poles.
▶
▶
▶
- (2) Water falls into the ground.
▶
- (3) The danger of flooding increases if the land is frozen.
▶
▶
- (4) When air is heated.
▶
▶

3 A) Write the scientific term:

- (1) The amount of water vapor in the air. (.....)
- (2) A device used to track thunderstorms, hurricanes and rainfall speed. (.....)

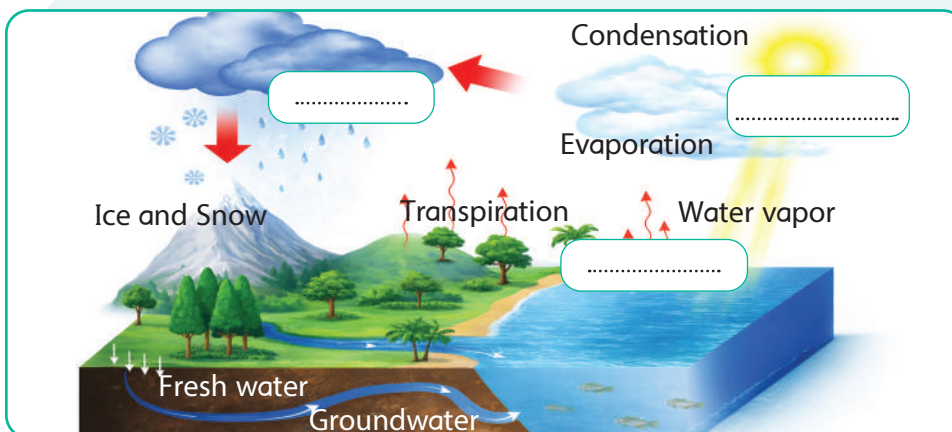
B) What happens..?

- (1) When the ice melts suddenly.
▶
- (2) To the air density, as we move down toward the bottom of a mountain.
▶

c) How do global winds affect the climate of an area?

▶
.....
.....

4 A) complete the journey through the water cycle:



energy loss

energy gain

gravity

B) Give reason for each of the following:

- (1)  The rareness of precipitation of rain falls in the deserts.

▶

(2) Changing of water from one state to another state.



(3) Sand loses heat faster than water.



Science Exam 4

1 A) Choose the correct answer:



Which of the following statements is correct?

- (a) Water and land usually have the same temperature.
- (b) Water heats and cools faster than the Earth's surface.
- (c) The Earth's surface heats and cools faster than water.
- (d) The Earth absorbs and stores more thermal energy than the oceans and seas.

B) What happens..?

(1)  Dust accumulates in solar panels.



(2) The weather if the sun rays fall very inclined on an area.



(3) Sun rays fall perpendicular on the equator.



C) What is the importance of weather rader.



2 A) Cross out the odd word:

Temperature - Volcano - Humidity - Air pressure



B) Give reason for each of the following:

(1) desert formation.



(2)  Flamingos migrate to warmer climate.



(3)  Snow falls in some places.



B) Explain the scientific reason for:



The spinning of the paper spirals over a turned-on lamp.



3 A) Classify the following sentences into air current or wind:

(1) Vertical movement of air.

(.....)

(2) Horizontal movement of air.

(.....)

B) Mention:

- (1) The importance of a rain gauge.
▶
- (2) One effect of drought.
▶
.....
- (3) A factor that determines wind direction.
▶

4 A) Complete the following sentences:

- (1) It is the process in which water falls on Earth in the form of rain, sleet or hail. (.....)
- (2) It is the weight of the air above a certain area. (.....)

B) Define:

- (1) Meteorology ▶
- (2) Sand storm ▶

C) 📖 How does energy from the sun drive the cycling of wind and water around Earth?

▶

.....

.....

D) 📝 Explain How the atmospheric properties differ at the mountain summit compared to the mountain base.

▶

.....

.....

Science Exam 5

1 A) Complete the following:

The amount of force that air exerts on its surroundings is called

B) Mention:

(1) The role of gravity in the water cycle.

.....

(2) One use for the anemometer.

▶

(3) An example for process that occurs when matter loses energy.

▶

C) How do plants help in the water cycle?

▶

2 A) Complete the following sentences:

The regions in which the evaporation process is greatest are called

B) Give reason for each of the following:

(1) Ice crystals and water droplets in clouds fall back again to Earth.

▶

(2) The regions near the two poles are very cold.

▶

C)  How does a meteorologist predict what the weather will be?



D)  What is the relationship between convection and condensation?



3 A)  Choose the correct answer:

(1) What happens when the clouds become so heavy that they cannot hold water?

- (a) Water falling on the ground. (b) Water evaporates.
(c) Another cloud forms. (d) The clouds become very large.

(2) The main factor affecting the movement of wind and water on the Earth's surface

- (a) The unequal solar heating system.
(b) Transpiration process in plants.
(c) The evaporation process from oceans and seas.
(d) The flow of water across the Earth's surface due to gravity.

B)  What happens..?

(1) If there was no wind?



(2) When does precipitation sink into the earth?



C)  Where does the energy that drives convection currents come from?



4

Use the words bank to label each example with the correct part of the water cycle.

condensation

evaporation

precipitation

runoff

- (1) A shallow river dries up
- (2) Snow falls on a cold afternoon
- (3) Fog forms over a field in the morning
- (4) Water in a river travels down a mountainside and into the sea

B) Define:

- (1) Drought
- (2) Flooding
- (3) Sandstorm

رحلة تعليمية متكاملة



Science Exam 1

1 A) Write the scientific term:

It is considered the main source of energy in the water cycle.

(The Sun)

B) Give reason for each of the following:

(1) Sandstorms have harmful effects on human health.

- Carry dust and fine particles that cause respiratory problems and eye irritation.
- Hazardous to motorists because they greatly reduce visibility.
- Carry debris and cause damage.

(2) About 10% of the water vapor in the air comes from plants.

- Because of transpiration, where plants release water vapor into the Atmosphere.

(3) Formation of clouds in the sky.

- Due to the condensation of water vapor when air cools.

(4) The weather in the area near the equator is hot.

- Because the Sun's rays fall perpendicular on the equator, so it receives more heat energy.

رحلة تعليمية متكاملة



2 A) Choose from the words bank:

At the top of the mountain

The same

Higher

Lower

- (1) The air pressure is ► **lower.**
- (2) The temperature is ► **lower.**
- (3) The air density is ► **lower.**

Explain your answer:

► **Because as altitude (height) increases, air molecules spread out, so pressure, temperature, and density decrease.**

B) What happens..?

- (1) The rate of evaporation of water in a lake increases.
► **More water vapor enters the atmosphere, and the lake level may decrease or the lake may dry up.**
- (2) Placing cold water on top of hot water.
► **Cold water sinks and hot water rises, forming a convection current.**
- (3) Sand and water are exposed for a whole day to the sunlight.
► **Sand heats up quickly because it absorbs heat faster.**
► **Water heats up slowly because it absorbs heat more slowly and distributes it through convection.**

3 A) Choose the correct answer:

- (1)  It is the transformation of water vapor into liquid water droplets in the air.
 (a) Transpiration (b) Evaporation (c) Condensation (d) Melting
- (2) Oceans help improve the world's climate through
 (a) Heat absorption. (b) Nitrogen gas absorption.
 (c) Salt storage. (d) Water storage.

B) Mention the function of:

- (1) Barometer ► **Measures Atmospheric pressure.**
- (2) Anemometer ► **Measures wind speed.**
- (3) Rain gauge ► **Measures the amount of rainfall.**
- (4) Weather radar ► **Detects storms and precipitation and tracks their movement.**

4 A) Complete the following sentences:

- (1) Water vapor condenses in the sky to form **clouds.**
- (2) Heavy rain for a long period of time may cause **flooding.**

B) How is energy transfer related to the water cycle?

- **The Sun transfers heat energy to water, causing evaporation.**
- **Heat transfer in the atmosphere is known as convection. Then water vapor loses heat when it becomes a rain droplets to fall, and the cycle repeats.**

B)  What elements shape local and regional weather changes surrounding you?

- **Temperature** ► **Air pressure** ► **Wind** ► **Humidity**
► **Large water bodies**

C)  **Define:**

- (1) Reservoir ► **A natural storage location of water on earth (like lakes, or groundwater).**
(2) Convection current ► **The movement of air or water caused by differences in temperature and density (warm rises, cool sinks).**

Science Exam 2

1 A) Choose the correct answer:

 Among the forms of precipitation

- (a) **Rain, hail, and snow.** (b) Sun, rain, and snow.
(c) Seas, rivers, and oceans. (d) Mountains, valleys, and rivers.

B) **What happens..?**

- (1) To the Atmospheric pressure as we move up toward the top of a mountain.
► **Atmospheric pressure decreases and temperature decreases.**
(2) The sunlight falls on the snow.
► **Snow melts and may change into water (melting) and may cause flooding.**
(3) When water gains high heat energy.
► **It evaporates and changes into water vapor.**
(4) When the weather is dry for a long time.
► **Drought may occur.**

2 A) Correct the underlined words:

Deserts are formed by the effect of moist air. (**dry air**)

B) State the function of each of the following:

- (1) Weather map: ► **Shows weather conditions of different areas.**
- (2) Rain gauge: ► **Measures the amount of rainfall.**

C) Mention:

- (1) The two factors affecting the water cycle.
► **Heat energy from the Sun and gravity.**
- (2) The steps of studying of weather.
► **Gather data (using tools such as barometers and thermometers).**
► **Collect data (using tools like satellites and weather balloons to measure different altitudes).**
► **Analyze data.**
► **Prepare weather maps by adding other factors (such as different landforms).**
► **Predict weather (forecast).**

3 A) Complete the following:

Evaporation process reverse process **condensation** process
melting process reverse process freezing process.

- (1) What is the importance of weather balloons.
► **carry measurement tools high into the atmosphere so that conditions can be measured from different altitudes.**
- (2) What are the effects and the costs of too much or too little precipitation?
► **Too much precipitation ➡ Floods, crop, and house damage.**
► **Too little precipitation ➡ Drought, crop failure, water shortage, sandstorms.**

(3) Explain meteorologist represents weather forecasts as probability ratios.

► **Because weather predictions are not always certain, due to unexpected changes in wind, air, or ocean temperature, or humidity in the air, they use percentages (like 70% chance of rain) to show the probability of occurrence.**

4 A) 📖 If a meteorologist wants to know. They should use.

If a meteorologist wants to know	They should use
(1) The speed of a tornado's winds.	► Anemometer
(2) Whether it rained more this summer or last summer.	► Rain gauge records
(3) The possible path of a hurricane.	► Weather radar
(4) The current atmospheric pressure.	► Barometer

(5) 📖 Where does the energy that drives convection currents come from?

► **From the Sun (solar heat energy).**

B) 📝 Define:

- (1) Convection ► **The transfer of heat by the movement of liquids or gases in currents (warm rises, cool sinks).**
- (2) Density ► **The amount of mass in a given volume of a substance.**

Science Exam 3

1 A) Choose the correct answer:

📖 The temperature may reach more than 50 degrees in Aswan in the summer. This reflects

- (a) Humidity (b) Atmosphere (c) Weather (d) Climate

B) Give reason for each of the following:

- (1) Importance of condensation in the water cycle.
▶ **Because it forms clouds, which lead to precipitation.**
- (2)  Living organisms are considered water reservoirs on the Earth's surface.
▶ **Because living organisms store water inside their bodies.**
- (3) The amount of water on Earth's surface doesn't change.
▶ **Because water moves through the water cycle, changing its state but not its total amount.**
- c) How does the amount of solar energy affect the transpiration rate of plants' leaves?
▶ **When solar energy increases, the transpiration rate increases, because more heat causes more water to evaporate from leaves.**

2 A) Complete the following:

Melting ice in an area can cause **flooding**.

B) Explain the scientific reason:

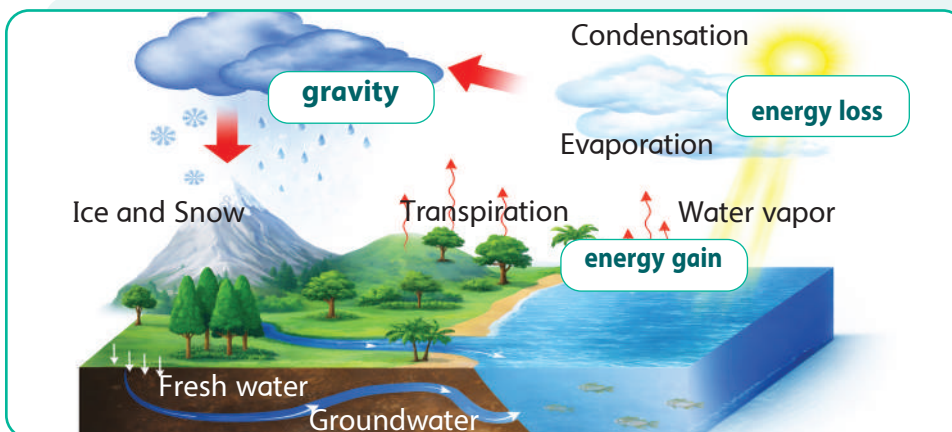
- (1) The hottest regions on Earth are in the middle area, while the coolest regions are at the poles.
▶ **Because the middle area (near the equator) receives the sun's rays directly, so it gets more heat and energy while at the poles, the sun rays fall at a slanted angle so the heat spreads over a larger area and becomes weaker making the poles colder.**
- (2) Water falls into the ground.
▶ **Due to gravity .**
- (3) The danger of flooding increases if the land is frozen.
▶ **Because frozen land prevents water from soaking into the soil, so water flows on the surface.**
- (4) When air is heated.
▶ **It expands, becomes less dense, and rises.**

3 A) Write the scientific term:

- (1) The amount of water vapor in the air. (**Humidity**)
- (2) A device used to track thunderstorms, hurricanes and rainfall speed. (**Weather radar**)

B) What happens..?

- (1) When the ice melts suddenly.
► **Water level increases quickly and may cause floods.**
 - (2) To the air density, as we move down toward the bottom of a mountain.
► **Air density increases.**
- c) 📖 How do global winds affect the climate of an area?
► **They transfer heat from one region to another, affected by temperature (different amounts of solar radiation in different areas and different latitudes leading to convection currents)**

4 A) 📖 complete the journey through the water cycle:

energy loss

energy gain

gravity

B) Give reason for:

- (1) 📖 The rareness of precipitation of rain falls in the deserts.
► **Because deserts have dry air due to global winds.**

- (2) Changing of water from one state to another state.
 - ▶ **Because water gains or loses heat energy.**
 - ▶ **When water gains heat energy, it changes from solid to liquid (melting) or from liquid to gas (evaporation).**
 - ▶ **When water loses heat energy, it changes from gas to liquid (condensation) or from liquid to solid (freezing).**
- (3) Sand loses heat faster than water.
 - ▶ **Because water absorbs heat energy slowly and distributes it throughout the water, while land heats up quickly on the surface (water has a high specific heat)**

Science Exam 4

1 A) Choose the correct answer:



Which of the following statements is correct?

- (a) Water and land usually have the same temperature.
- (b) Water heats and cools faster than the Earth's surface.
- (c) **The Earth's surface heats and cools faster than water.**
- (d) The Earth absorbs and stores more thermal energy than the oceans and seas.

B) What happens..?

- (1) Dust accumulates in solar panels.
 - ▶ **The efficiency of solar panels decreases, disrupts power, and less electricity is produced.**
- (2) The weather if the sun rays fall very inclined on an area.
 - ▶ **It is distributed over a larger area and its effect is less; it receives less heat energy.**

- (3) Sun rays fall perpendicular on the equator.
- **The temperature becomes high because sun rays are focused, so it has a greater effect because it receives more heat energy.**
- C) What is the importance of weather rader.
- **It detects precipitation and helps track thunderstorms and hurricanes.**

2 A) Cross out the odd word:

Temperature - Volcano - Humidity - Air pressure

- **Volcano (because the others are weather elements)**

B) Give reason for each of the following:

- (1) desert formation.
- **Due to a lack of rainfall and existence of dry air.**
- (2) 📖 Flamingos migrate to warmer climate.
- **Because it provides suitable conditions for breeding.**
- (3) 📖 Snow falls in some places.
- **Because the temperature is very low, so water droplets freeze before reaching the ground.**

B) Explain the scientific reason for:

- 📖 The spinning of the paper spirals over a turned-on lamp.
- **Because hot air rises due to convection currents, causing the spiral to spin.**

3 A) Classify the following sentences into air current or wind:

- (1) Vertical movement of air. **(Air current)**
- (2) Horizontal movement of air. **(Wind)**

B) Mention:

- (1) The importance of a rain gauge.
► **It measures the amount of rain fall.**
- (2) One effect of drought.
► **Water shortage means less water available for growing crops, farming animals, industry, and cities.**
- (3) A factor that determines wind direction.
► **Differences in air pressure.**

4 A) Complete the following sentences:

- (1) It is the process in which water falls on Earth in the form of rain, sleet or hail. **(Precipitation)**
- (2) It is the weight of the air above a certain area. **(Atmospheric pressure)**

B) Define:

- (1) Meteorology ► **The study of weather and climate.**
- (2) Sand storm ► **Very strong winds blow up sand or dust from an area that is extremely dry.**

- C)**  How does energy from the sun drive the cycling of wind and water around Earth?

► **The sun heats Earth's surface unevenly because of the inclination of sun rays fall Causing differences in air temperature and pressure which make air moves as wind and water changes it's state to continue the water cycle.**

- D)**  Explain How the atmospheric properties differ at the mountain summit compared to the mountain base.

► **At the mountain summit, the temperature and air pressure are lower and the air is less dense than at the mountain base**

Science Exam 5

1 A) Complete the following:

The amount of force that air exerts on its surroundings is called **atmospheric pressure**.

B) Mention:

(1) The role of gravity in the water cycle.

► **Gravity causes water to fall as precipitation and move downhill as runoff.**

(2) One use for the anemometer.

► **It is used to measure wind speed.**

(3) An example for process that occurs when matter loses energy.

► **Freezing or condensation.**

C) How do plants help in the water cycle?

► **Through transpiration, plants release water vapor into the air.**

2 A) Complete the following sentences:

The regions in which the evaporation process is greatest are called **deserts**.

B) Give reason for each of the following:

(1) Ice crystals and water droplets in clouds fall back again to Earth.

► **Because of gravity.**

(2) The regions near the two poles are very cold.

► **Because the Sun's rays fall at a slanted angle, so they receive less heat energy.**

- C)  How does a meteorologist predict what the weather will be?
 ► **By collecting data using weather tools, analyzing it, and using weather maps and computer models to make forecasts.**
- D)  What is the relationship between convection and condensation?
 ► **Convection causes warm air to rise while cold fluids are denser and tend to sink. As warm, moist air rises, it cools and condenses into water droplets. leading to condensation and cloud formation.**

3 A) Choose the correct answer:

- (1) What happens when the clouds become so heavy that they cannot hold water?
 (a) **Water falling on the ground.** (b) Water evaporates.
 (c) Another cloud forms. (d) The clouds become very large.
- (2) The main factor affecting the movement of wind and water on the Earth's surface.....
 (a) **The unequal solar heating system.**
 (b) Transpiration process in plants.
 (c) The evaporation process from oceans and seas.
 (d) The flow of water across the Earth's surface due to gravity.
- B)  **What happens..?**
- (1) If there was no wind?
 ► **There would be little movement of air, and weather patterns would not change.**
- (2) When does precipitation sink into the earth?
 ► **It becomes groundwater.**
- C)  Where does the energy that drives convection currents come from?
 ► **From the Sun.**

4

Use the words bank to label each example with the correct part of the water cycle.

condensation

evaporation

precipitation

runoff

- (1) A shallow river dries up **Evaporation**.
- (2) Snow falls on a cold afternoon **Precipitation**.
- (3) Fog forms over a field in the morning **Condensation**.
- (4) Water in a river travels down a mountainside and into the sea **Runoff**.

B) Define:

- (1) Drought ► **A long period with little or no rainfall.**
- (2) Flooding ► **A long period of rainfall Overflow onto land.**
- (3) Sandstorm ► **very strong winds blow up sand and/or dust from an area that is extremely dry.**

رحلة تعليمية متكاملة



حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر مارس



First Question: Scientific Term:

Mr Omar Tarek

- 1- It is the main source of energy that affects the water cycle ()
- 2- It is process in which water falls on Earth in form of rain, sleet, snow or hail ()
- 3- It is the process in which matter changes from liquid to gas ()
- 4- It is the process in which matter changes from gas to liquid ()
- 5- It is the step in which water flows along Earth`s surface into the river and then into the ocean or sea ()
- 6- It is the step in which rainwater falling on Earth`s surface is collected in different water bodies ()
- 7- They are places of storing water on Earth ()
- 8- The force which causes moving down of water from higher places to lower places on Earth ()
- 9- It is a form of evaporation that takes place through stomata which are found in plant leaves ()
- 10- It is the process which helps in formation of clouds in the sky ()
- 11- The cycle that involves that continuous movement of water from different water bodies to the atmosphere then falling back to Earth in form of rain, sleet or snow ()
- 12- It is the method by which heat transfers through liquid and gases where hot molecules rise upward and cooler molecules fall down ()
- 13- It is method by which heat of Sun transfer from space to Earth ()
- 14- it is caused when air warmed by the solar radiation rises and then replaced by cooler air flows from nearby places ()
- 15- It is the main source for warming of air and forming wind ()
- 16- Large areas of land which are formed due to the effect of Dry air ()
- 17- The scientist who studies the atmosphere to understand Earth`s weather ()

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- 18- A phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range ()
- 19- The side of mountain ranges at coastal regions that faces coast ()
- 20- The side of mountain ranges at coastal regions in which rain shadow phenomenon occurs ()
- 21- The process that happens after condensation of water vapor in the atmosphere causing rain falls at the wet side of a coastal mountain range ()
- 22- The science that studies the weather conditions ()
- 23- The device that is used to measure atmospheric pressure ()
- 24- The device that is used to measure temperature ()
- 25- It is the weight of the air above an area ()
- 26- It is the type of maps that meteorologists use to collect data and analyze data about weather ()
- 27- The falling of snow to Earth`s surface when water droplets in clouds are changed into ice crystals ()
- 28- The vertical movement of air in atmosphere ()
- 29- The horizontal movement of air in atmosphere ()
- 30- The tool that is used to measure the intensity and speed of precipitation ()
- 31- The tool that is used to measure the amount of rain in certain area ()
- 32- The force that pulls big and heavy water droplets toward the ground causing precipitation ()
- 33- It is a natural phenomenon in which extreme dry and hot weather affect an area for a long period of time ()
- 34- It is a natural phenomenon in which level of water in a river increases until it overflows onto its banks ()
- 35- It is a natural phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars ()

Second Question: Give Reason For:

1- Drying up of the large salt lake in turkey in summer season

.....

2- Formation of clouds in the sky

.....

3- Changing of water from one state to another

.....

4- Moving down glacier from the top of mountain to its foot

.....

5- Changing of some amount of water into water vapor

.....

6- About 10% of water vapor in air comes from plants

.....

7- Hot air moves upward above cold air

.....

8- The weather in the area near the equator is hot

.....

9- The effect of heat is low in the area at the north and south of the equator

.....

10- The difference in temperature and densities in water of oceans and atmosphere

.....

11- The water cycle is very important for all living organisms on Earth`s surface

.....

12- On adding warm water to cold water without shaking the warm water stay above cold water without mixing

.....

13- The formation of wind is determined by the amount of solar radiation received by the Earth

.....

14- Desert farming faces many difficulties

.....

15- The land of the side of coastal mountain range that is away from the coast is usually dry

16- Hot air moves up, while cold air moves down

17- In the summer days at noon we may not able to stand barefoot on the sand of a beach but we can swim in the sea water

18- Sometimes meteorologists couldn't predict the weather of next days

19- We put thermometer in weather balloon

20- When air is heated it expands

21- Convection currents in the atmosphere are considered as vertical movement of air

22- The bigger and heavier water droplets are falling down to the Earth's surface causing precipitation

23- Extreme weather phenomena became more stronger in many places around the world

24- Floods have some benefits

25- Sandstorms have harmful effects on human health

26- Flooding is more dangerous if the ground is frozen

27- It is easy to see a sandstorm from a long distance

Third Question: What Happens When:

1- The level of water in a lake when the rate of evaporation increases

.....

2- The snow when sunlight falls on it

.....

3- Water of seas and oceans gains large amount of thermal energy

.....

4- You cover some leaves in a plant with a plastic bag then put this plant in the direct sunlight for awhile

.....

5- Moist air touches a cold bottle of water

.....

6- Water vapor in air condenses in the sky

.....

7- The water droplets in the clouds become very heavy

.....

8- The weather if the sun rays fall very inclined on an area

.....

9- The density of air if the cold air is warmed by the effect of solar energy

.....

10- The air temperature if there is no wind on Earth

.....

11- The movement of air when solar radiations heats up the air in an area

.....

12- The atmospheric pressure as we move up toward the top of a mountain

.....

13- The air density as we move down toward the bottom of a mountain

.....

14- The temperature of water inside a beaker if we put it under a lighted lamp for 15 minutes

.....

15- The temperature of hot sand in a desert at night

.....

16- The water movements when boiling it in a pot

.....

17- The water droplets in clouds when they become bigger and heavier

.....

18- The water droplets in clouds when the air is cold enough

.....

19- The building when they are subjected to strong floods

.....

20- The solar panels when dust accumulates on them

.....

Fourth Question: Put (✓) or (X):

1- Drying up water in large salt lake in Turkey is due to condensation ()

2- Transferring of energy in the water cycle causes increasing or decreasing water level in some lakes ()

3- Flamingos migrate to the large salt lake in Turkey when the weather becomes very cold ()

4- States of water change when water gains or loses energy ()

5- In the water cycle the step that follows condensation is runoff ()

6- Hottest regions are regions in which the evaporation is greatest ()

7- Falling of hail in coolest regions is an example of evaporation process ()

8- Water cycle affects the weather on Earth ()

9- During condensation process, water vapor changes into ice ()

10- Wind cause ocean current that transport water to different places on Earth`s surface ()

11- Evaporation of water means that liquid water changes into ice ()

12- The water cycle is the movement of water through different water reservoirs on Earth ()

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- 13- Water reservoirs on Earth include ocean and seas only ()
- 14- The two factors that control the movement of water in the water cycle are gravity and solar energy ()
- 15- Glaciers move from the top of mountains to the bottom of mountain due to the effect of gravity ()
- 16- The motion of air from one place to another leads to changing of water vapor into water in the air ()
- 17- Melting and transpiration processes only occur by cooling ()
- 18- When the Sun heats the water in a river the water changes into gas state ()
- 19- Water comes out from stomata to the air in form of water vapor ()
- 20- You can see transpiration process when you set a plant its leaves covered with a plastic bag in the sunlight ()
- 21- As a result of low temperature water returns back into water vapor ()
- 22- Clouds consists of tiny water droplets that have condensed out of the air ()
- 23- There is no water found in the air around us ()
- 24- When water vapor cools in the sky, it forms clouds ()
- 25- Clouds are made up of millions of tiny water droplets ()
- 26- During the water cycle condensation of water vapor occurs after precipitation process ()
- 27- All living organisms on Earth depend on water to survive ()
- 28- Falling of sleet in an area is an example of precipitation process ()
- 29- Convection causes the movement of low density air above the high density air ()
- 30- The heat of the Sun transfers through space to Earth`s atmosphere by convection ()
- 31- When fresh water changes into snow and ice this means that fresh water gains thermal energy ()
- 32- Rains fall and collect in oceans by the effect of gravity force ()
- 33- There are very little rains in desert areas ()

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- 34- The weather in the area near the equator is very cold due to falling of sun rays perpendicular on Earth`s surface ()
- 35- The temperature is equal at all areas on Earth`s surface ()
- 36- Hot air has higher density than that of cold air so it rises up ()
- 37- Due to radiation current warm water move above cold water ()
- 38- Deserts are formed by the effect of moist air ()
- 39- Unequal heating of Earth between the poles and the equator generates wind ()
- 40- Earth has a global wind system that consists of water waves that move in constant direction ()
- 41- The weather condition will not affected by the absence of wind ()
- 42- The rain never falls on deserts ()
- 43- The main challenge that faces people in desert is the low amount of water ()
- 44- The air becomes more dense at the top of mountain compared to the bottom of this mountain ()
- 45- Precipitation occurs after condensation of water vapor in atmosphere ()
- 46- Solar energy and wind turbines can be used to operate desert farms ()
- 47- The properties of the atmosphere at the top of a mountain and at its bottom are similar ()
- 48- When the hot and humid air meets the cold and dry air, the hot air rises ()
- 49- Condensation of water vapor in atmosphere happens due to increasing the air temperature ()
- 50- Meteorology and meteorologist are used to express the same meaning ()
- 51- The sand is heated up slower than water during daytime ()
- 52- The sand is cooled off in a shorter time than sea water during night ()
- 53- Mapping data represent data about weather conditions on a map ()

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- 54- Sometimes meteorologist could not predict the weather due to unexpected quick changes happen in weather condition ()
- 55- Sandstorms decrease the visibility during driving cars ()
- 56- Sandstorms blow up from a dry area such as desert ()
- 57- Floods may cause death of people and animals ()
- 58- Dust storms have no harmful effects on the plane engines ()
- 59- Anemometer is used to measure the speed of precipitation ()
- 60- The direction of wind movement is affected by the difference of air temperature ()

Fifth Question: Choose from column (B) what suits it in column (A):

(A)	(B)
1- Condensation	a. falling of snow in an area
2- Evaporation	b. formation of fog over field in the morning
3- Precipitation	c. formation of glacier in an area
4- Runoff	d. drying of a shallow lake
	e. flowing of river`s water into a sea

1- 2- 3- 4-

(A)	(B)
1- Freezing	a. are locations where water collect on Earth
2- Water cycle	b. occurs when water releases thermal energy
3- Water reservoirs	c. changing of water droplets into water vapor
4- Evaporation	d. the continuous movement of water among water reservoirs
	e. the main source of energy on Earth`s surface

1- 2- 3- 4-

(A)	(B)
1- The weather becomes hot when	a. the sun rays fall semi – inclined on Earth`s surface
2- The weather becomes warm when	b. the sun rays falls horizontally on Earth`s surface
3- The weather becomes very cold when	c. the sun rays falls perpendicular on Earth`s surface
	d. the sun rays falls very inclined on Earth`s surface

1- 2- 3-

(A)	(B)
1- Global Earth`s system	a. affect the movement of water through water cycle
2- Rotation of Earth	b. consists of winds that blow in a constant direction
3- Convection currents and gravity	c. causes the disappear of some ecosystems
	d. one of the factors that determine the wind direction

1- 2- 3-

(A)	(B)
1- Anemometer	a. measuring the atmospheric pressure
2- Weather radar	b. measuring the speed of wind
3- Rain gauge	c. measuring the intensity and speed of precipitation
	d. measuring the amount of rain

1- 2- 3-

Sixth Question: Mention the uses of:

1- Thermometer:

.....

2- Barometer:

.....

3- Anemometer:

.....

4- Weather radar:

.....

5- Rain gauge:

.....

Seventh Question: Mention harms for each of the following:

1- Drought:

.....

.....

2- Flood:

.....

.....

3- Sandstorms (Dust storm):

.....

.....

Variable Questions:

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Classify the operations in the following table:

Processes that involve gaining energy	Processes that involve losing energy

What is the relationship between convection and condensation?

.....

.....

Explain the role of gravity in water cycle in nature

.....

.....

What challenges do farmers face in the desert?

.....

.....

Mention the main stages of weather forecasting process

.....

.....

Mention the importance of weather map

.....

.....

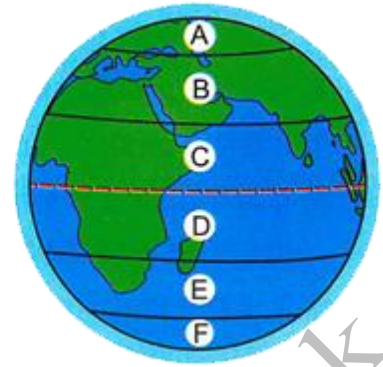
How does the amount of energy emitted from the Sun affect the rate of transpiration in plant leaves?

.....

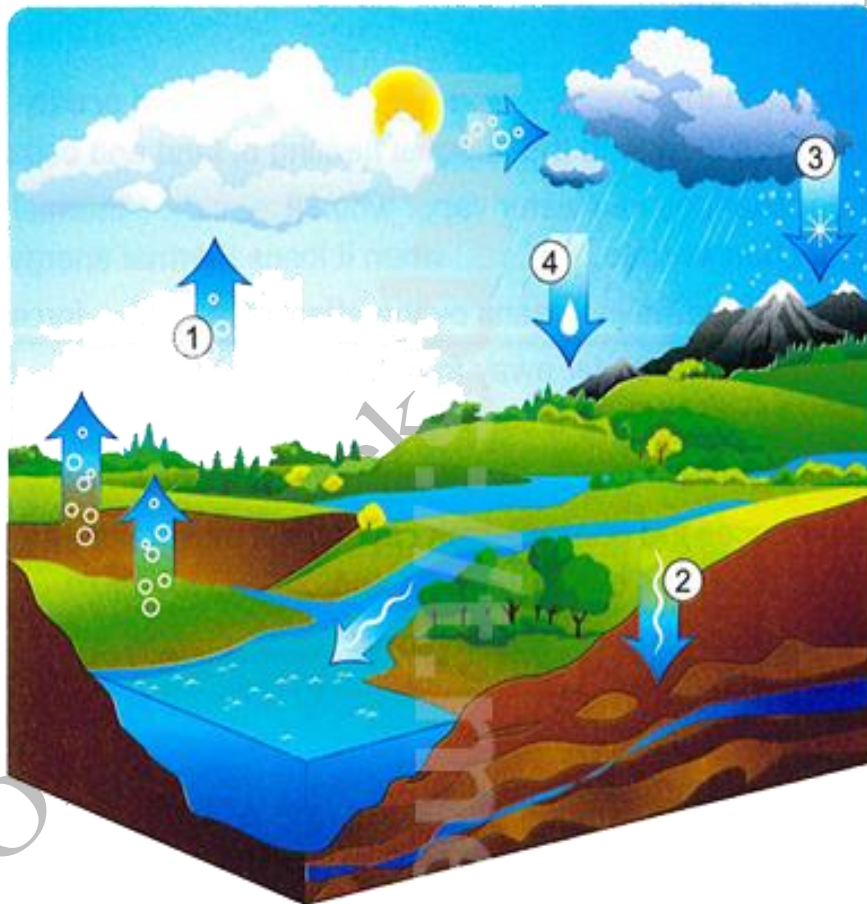
.....

Look at the opposite figure and complete the following sentences:

1. Areas and are considered as hottest areas.
2. Areas and are considered as moderate areas.
3. Areas and are considered as coolest areas.

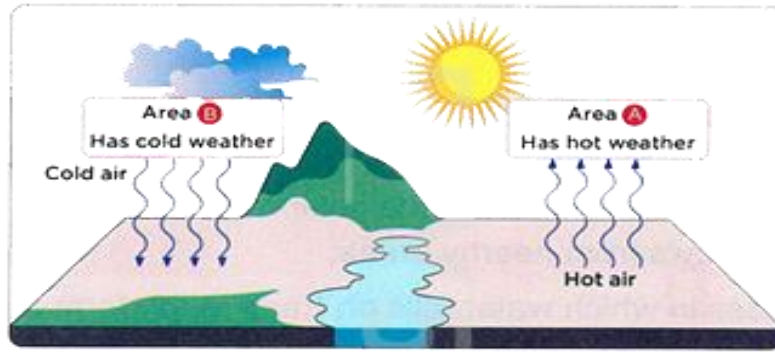


Look at the opposite figure and put (✓) or (X):



1. Arrow number ① indicates lose of thermal energy. ()
2. Arrow number ② indicates the effect of the gravitational force on water. ()
3. Arrow number ③ represents precipitation process. ()
4. Arrow number ④ indicates gain of thermal energy. ()

Look at the opposite figure and complete the following sentences:

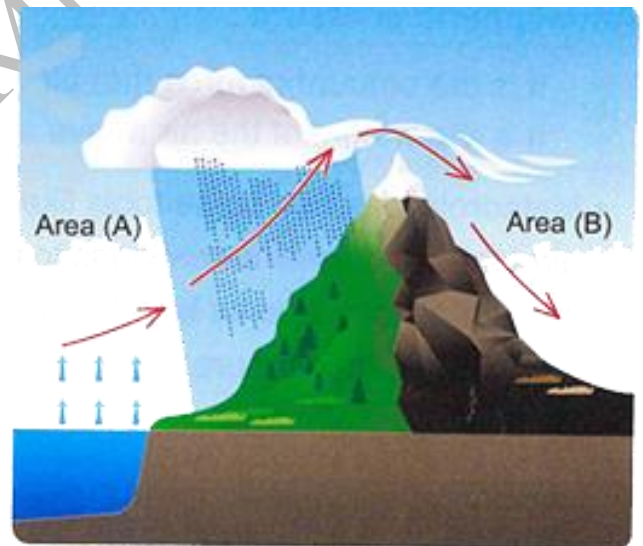


(more – solar radiation – loses – less)

1. Air in area (A) moves upward, because it has density.
2. Air in area (A) becomes hot by the effect of
3. Air in area (B) moves downward, because it has density.
4. When air in area (A) moves to area (B), it thermal energy, so it will fall down near the Earth's surface.

Look at the opposite figure and complete the following sentences:

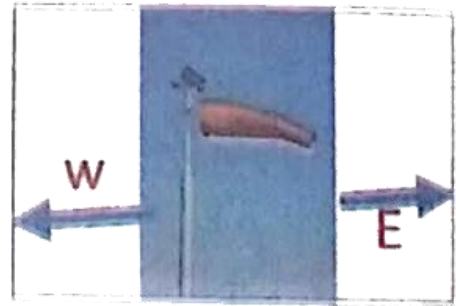
1. The air is dry in area
2. The air is humid in area
3. The air descends and becomes warm in area
4. The air encounters the mountain range then rises and cools in area
5. Evaporation, condensation and precipitation processes occur in area



In the picture in front of you:

a- The wind direction is the direction of the letter
.....

b- The wind direction is determined by two factors:
..... and



Observe the picture then answer the questions:

- 1- The device shown in the picture is used in
- 2- Weather is affected by many factors, including
(topography –green space –water bodies –all the previous)
- 3- Atmospheric pressure as we rise above the
surface of the earth. (increases –decreases)



First Question: Scientific Term:

- 1- It is the main source of energy that affects the water cycle (Sun)
- 2- It is process in which water falls on Earth in form of rain, sleet, snow or hail (Precipitation)
- 3- It is the process in which matter changes from liquid to gas (Evaporation)
- 4- It is the process in which matter changes from gas to liquid (Condensation)
- 5- It is the step in which water flows along Earth`s surface into the river and then into the ocean or sea (runoff)
- 6- It is the step in which rainwater falling on Earth`s surface is collected in different water bodies (collection)
- 7- They are places of storing water on Earth (water reservoirs)
- 8- The force which causes moving down of water from higher places to lower places on Earth (gravity)
- 9- It is a form of evaporation that takes place through stomata which are found in plant leaves (transpiration)
- 10- It is the process which helps in formation of clouds in the sky (condensation)
- 11- The cycle that involves that continuous movement of water from different water bodies to the atmosphere then falling back to Earth in form of rain, sleet or snow (water cycle)
- 12- It is the method by which heat transfers through liquid and gases where hot molecules rise upward and cooler molecules fall down (convection)
- 13- It is method by which heat of Sun transfer from space to Earth (radiation)
- 14- It is caused when air warmed by the solar radiation rises and then replaced by cooler air flows from nearby places (wind)
- 15- It is the main source for warming of air and forming wind (sun)
- 16- Large areas of land which are formed due to the effect of Dry air (deserts)
- 17- The scientist who studies the atmosphere to understand Earth`s weather (meteorologist)

- 18- A phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range (rain shadow)
- 19- The side of mountain ranges at coastal regions that faces coast (wet side)
- 20- The side of mountain ranges at coastal regions in which rain shadow phenomenon occurs (dry side)
- 21- The process that happens after condensation of water vapor in the atmosphere causing rain falls at the wet side of a coastal mountain range (precipitation)
- 22- The science that studies the weather conditions (meteorology)
- 23- The device that is used to measure atmospheric pressure (barometer)
- 24- The device that is used to measure temperature (thermometer)
- 25- It is the weight of the air above an area (atmospheric pressure)
- 26- It is the type of maps that meteorologists use to collect data and analyze data about weather (weather map)
- 27- The falling of snow to Earth`s surface when water droplets in clouds are changed into ice crystals (snowfall)
- 28- The vertical movement of air in atmosphere (air)
- 29- The horizontal movement of air in atmosphere (wind)
- 30- The tool that is used to measure the intensity and speed of precipitation (weather radar)
- 31- The tool that is used to measure the amount of rain in certain area (rain gauge)
- 32- The force that pulls big and heavy water droplets toward the ground causing precipitation (gravity)
- 33- It is a natural phenomenon in which extreme dry and hot weather affect an area for a long period of time (drought)
- 34- It is a natural phenomenon in which level of water in a river increases until it overflows onto its banks (flooding)
- 35- It is a natural phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars (dust storm)

Second Question: Give Reason For:

1- Drying up of the large salt lake in turkey in summer season

Due to evaporation process

2- Formation of clouds in the sky

Due to condensation process

3- Changing of water from one state to another

Due to gaining or losing of thermal energy

4- Moving down glacier from the top of mountain to its foot

Due to the effect of gravity

5- Changing of some amount of water into water vapor

Due to evaporation process when water gains thermal energy

6- About 10% of water vapor in air comes from plants

Due to transpiration process by plants

7- Hot air moves upward above cold air

Due to convection where hot air has less density so it rises upward while cold air has more density so it falls down

8- The weather in the area near the equator is hot

Because the sun rays fall perpendicular on Earth's surface

9- The effect of heat is low in the area at the north and south of the equator

Because the sun rays fall semi – inclined on Earth's surface of these areas

10- The difference in temperature and densities in water of oceans and atmosphere

Because the heat of sun causes unequal heating of land and oceans

11- The water cycle is very important for all living organisms on Earth's surface

Because it provides water for all living organisms and regulates weather on Earth

12- On adding warm water to cold water without shaking the warm water stay above cold water without mixing

Due to the effect of convection as warm water has less density than cold water so warm water will stay above cold water

13- The formation of wind is determined by the amount of solar radiation received by the Earth

Because warm air rises upward when it is heated by solar radiation and it is replaced by cooler air

14- Desert farming faces many difficulties

Because the desert climate is hot and the amount of water is small

15- The land of the side of coastal mountain range that is away from the coast is usually dry

Because the air descends on the side and becomes warm causing dryness of the land

16- Hot air moves up, while cold air moves down

Because hot air has less density while cold air has high density

17- In the summer days at noon we may not be able to stand barefoot on the sand of a beach but we can swim in the sea water

Because sand is heated up faster than water

18- Sometimes meteorologists couldn't predict the weather of next days

Due to unexpected quick changes in weather conditions

19- We put thermometer in weather balloon

To measure temperature at different altitudes

20- When air is heated it expands

Because molecules of air move away from each other

21- Convection currents in the atmosphere are considered as vertical movement of air

Because hot air rises up and cold air moves down

22- The bigger and heavier water droplets are falling down to the Earth's surface causing precipitation

Due to gravity force

23- Extreme weather phenomena became more stronger in many places around the world

Due to global climate change

24- Floods have some benefits

Because some ecosystems depend on floods such as Nile

25- Sandstorms have harmful effects on human health

Because it harms the human eyes and respiratory system

26- Flooding is more dangerous if the ground is frozen

Because the ground cannot absorb water

27- It is easy to see a sandstorm from a long distance

Because it extends for several kilometers long and its height may reach hundreds of meters

Third Question: What Happens When:

1- The level of water in a lake when the rate of evaporation increases

The level of water will decrease

2- The snow when sunlight falls on it

The snow will melt and change into liquid water

3- Water of seas and oceans gains large amount of thermal energy

It will change into water vapor (evaporation process)

4- You cover some leaves in a plant with a plastic bag then put this plant in the direct sunlight for awhile

Water droplets will be formed inside the bag (transpiration)

5- Moist air touches a cold bottle of water

Water vapor will condense on the surface of bottle (condensation)

6- Water vapor in air condenses in the sky

It will form clouds

7- The water droplets in the clouds become very heavy

Rainfall (precipitation)

8- The weather if the sun rays fall very inclined on an area

The weather will be very cold

9- The density of air if the cold air is warmed by the effect of solar energy

The density will decrease

10- The air temperature if there is no wind on Earth

The regions around equator become extremely hot and the poles will completely freeze

11- The movement of air when solar radiations heats up the air in an area

The air will move upward

12- The atmospheric pressure as we move up toward the top of a mountain

The atmospheric pressure will decrease

13- The air density as we move down toward the bottom of a mountain

The air density will increase

14- The temperature of water inside a beaker if we put it under a lighted lamp for 15 minutes

The temperature of water will increase

15- The temperature of hot sand in a desert at night

The temperature of sand will decrease

16- The water movements when boiling it in a pot

Hot water moves up and cold water falls down

17- The water droplets in clouds when they become bigger and heavier

They fall down to Earth`s surface due to gravity force

18- The water droplets in clouds when the air is cold enough

They change into ice crystals that fall to Earth`s surface

19- The building when they are subjected to strong floods

They are damaged by moving or breaking

20- The solar panels when dust accumulates on them

Solar panels stop generating energy

Fourth Question: Put (✓) or (X):

1- Drying up water in large salt lake in Turkey is due to condensation (X)

2- Transferring of energy in the water cycle causes increasing or decreasing water level in some lakes (✓)

3- Flamingos migrate to the large salt lake in Turkey when the weather becomes very cold (X)

4- States of water change when water gains or loses energy (✓)

5- In the water cycle the step that follows condensation is runoff (X)

6- Hottest regions are regions in which the evaporation is greatest (✓)

7- Falling of hail in coolest regions is an example of evaporation process (X)

8- Water cycle affects the weather on Earth (✓)

9- During condensation process, water vapor changes into ice (X)

10- Wind cause ocean current that transport water to different places on Earth`s surface (✓)

11- Evaporation of water means that liquid water changes into ice (X)

12- The water cycle is the movement of water through different water reservoirs on Earth (✓)

- 13- Water reservoirs on Earth include ocean and seas only (X)
- 14- The two factors that control the movement of water in the water cycle are gravity and solar energy (✓)
- 15- Glaciers move from the top of mountains to the bottom of mountain due to the effect of gravity (✓)
- 16- The motion of air from one place to another leads to changing of water vapor into water in the air (✓)
- 17- Melting and transpiration processes only occur by cooling (X)
- 18- When the Sun heats the water in a river the water changes into gas state (✓)
- 19- Water comes out from stomata to the air in form of water vapor (✓)
- 20- You can see transpiration process when you set a plant its leaves covered with a plastic bag in the sunlight (✓)
- 21- As a result of low temperature water returns back into water vapor (X)
- 22- Clouds consists of tiny water droplets that have condensed out of the air (✓)
- 23- There is no water found in the air around us (X)
- 24- When water vapor cools in the sky, it forms clouds (✓)
- 25- Clouds are made up of millions of tiny water droplets (✓)
- 26- During the water cycle condensation of water vapor occurs after precipitation process (X)
- 27- All living organisms on Earth depend on water to survive (✓)
- 28- Falling of sleet in an area is an example of precipitation process (✓)
- 29- Convection causes the movement of low density air above the high density air (✓)
- 30- The heat of the Sun transfers through space to Earth`s atmosphere by convection (X)
- 31- When fresh water changes into snow and ice this means that fresh water gains thermal energy (X)
- 32- Rains fall and collect in oceans by the effect of gravity force (✓)

- 33- There are very little rains in desert areas (✓)
- 34- The weather in the area near the equator is very cold due to falling of sun rays perpendicular on Earth`s surface (X)
- 35- The temperature is equal at all areas on Earth`s surface (X)
- 36- Hot air has higher density than that of cold air so it rises up (X)
- 37- Due to radiation current warm water move above cold water (X)
- 38- Deserts are formed by the effect of moist air (X)
- 39- Unequal heating of Earth between the poles and the equator generates wind (✓)
- 40- Earth has a global wind system that consists of water waves that move in constant direction (X)
- 41- The weather condition will not affected by the absence of wind (X)
- 42- The rain never falls on deserts (X)
- 43- The main challenge that faces people in desert is the low amount of water (✓)
- 44- The air becomes more dense at the top of mountain compared to the bottom of this mountain (X)
- 45- Precipitation occurs after condensation of water vapor in atmosphere (✓)
- 46- Solar energy and wind turbines can be used to operate desert farms (✓)
- 47- The properties of the atmosphere at the top of a mountain and at its bottom are similar (X)
- 48- When the hot and humid air meets the cold and dry air, the hot air rises (✓)
- 49- Condensation of water vapor in atmosphere happens due to increasing the air temperature (X)
- 50- Meteorology and meteorologist are used to express the same meaning (X)
- 51- The sand is heated up slower than water during daytime (X)
- 52- The sand is cooled off in a shorter time than sea water during night (✓)

- 53- Mapping data represent data about weather conditions on a map (✓)
- 54- Sometimes meteorologist could not predict the weather due to unexpected quick changes happen in weather condition (✓)
- 55- Sandstorms decrease the visibility during driving cars (✓)
- 56- Sandstorms blow up from a dry area such as desert (✓)
- 57- Floods may cause death of people and animals (✓)
- 58- Dust storms have no harmful effects on the plane engines (X)
- 59- Anemometer is used to measure the speed of precipitation (X)
- 60- The direction of wind movement is affected by the difference of air temperature (✓)

Fifth Question: Choose from column (B) what suits it in column (A):

(A)	(B)
1- Condensation	a. falling of snow in an area
2- Evaporation	b. formation of fog over field in the morning
3- Precipitation	c. formation of glacier in an area
4- Runoff	d. drying of a shallow lake
	e. flowing of river's water into a sea

1- b 2- d 3- a 4- e

(A)	(B)
1- Freezing	a. are locations where water collect on Earth
2- Water cycle	b. occurs when water releases thermal energy
3- Water reservoirs	c. changing of water droplets into water vapor
4- Evaporation	d. the continuous movement of water among water reservoirs
	e. the main source of energy on Earth's surface

1- b 2- d 3- a 4- c

(A)	(B)
1- The weather becomes hot when	a. the sun rays fall semi – inclined on Earth`s surface
2- The weather becomes warm when	b. the sun rays falls horizontally on Earth`s surface
3- The weather becomes very cold when	c. the sun rays falls perpendicular on Earth`s surface
	d. the sun rays falls very inclined on Earth`s surface

1- c

2- a

3- d

(A)	(B)
1- Global Earth`s system	a. affect the movement of water through water cycle
2- Rotation of Earth	b. consists of winds that blow in a constant direction
3- Convection currents and gravity	c. causes the disappear of some ecosystems
	d. one of the factors that determine the wind direction

1- b

2- d

3- a

(A)	(B)
1- Anemometer	a. measuring the atmospheric pressure
2- Weather radar	b. measuring the speed of wind
3- Rain gauge	c. measuring the intensity and speed of precipitation
	d. measuring the amount of rain

1- b

2- c

3- d

Sixth Question: Mention the uses of:

1- Thermometer:

Used to measure the temperature

2- Barometer:

It measures the atmospheric pressure

3- Anemometer:

It measures the wind speed

4- Weather radar:

It measures the intensity and speed of precipitation and tracks hurricanes

5- Rain gauge:

It measures the amount of rain in a certain area

Seventh Question: Mention harms for each of the following:

1- Drought:

There is no enough water for people, plants and animals

2- Flood:

It causes death of people and animals

3- Sandstorms (Dust storm):

It harms human eyes and respiratory system

Variable Questions:

Classify the operations in the following table:

Processes that involve gaining energy	Processes that involve losing energy
Evaporation	Condensation
Melting	Freezing
Transpiration	

What is the relationship between convection and condensation?

Convection causes the rising of temperature of air contains water vapor

Condensation happens when the rising air loses its heat and water vapor condenses changes into clouds

Explain the role of gravity in water cycle in nature

Falling of melting ice crystals

Falling of liquid water from high altitude to low altitude

What challenges do farmers face in the desert?

Hot climate and small amount of water

Mention the main stages of weather forecasting process

Collection data

Analyzing data

Putting it all together

Mention the importance of weather map

It is a map that represents data on it

How does the amount of energy emitted from the Sun affect the rate of transpiration in plant leaves?

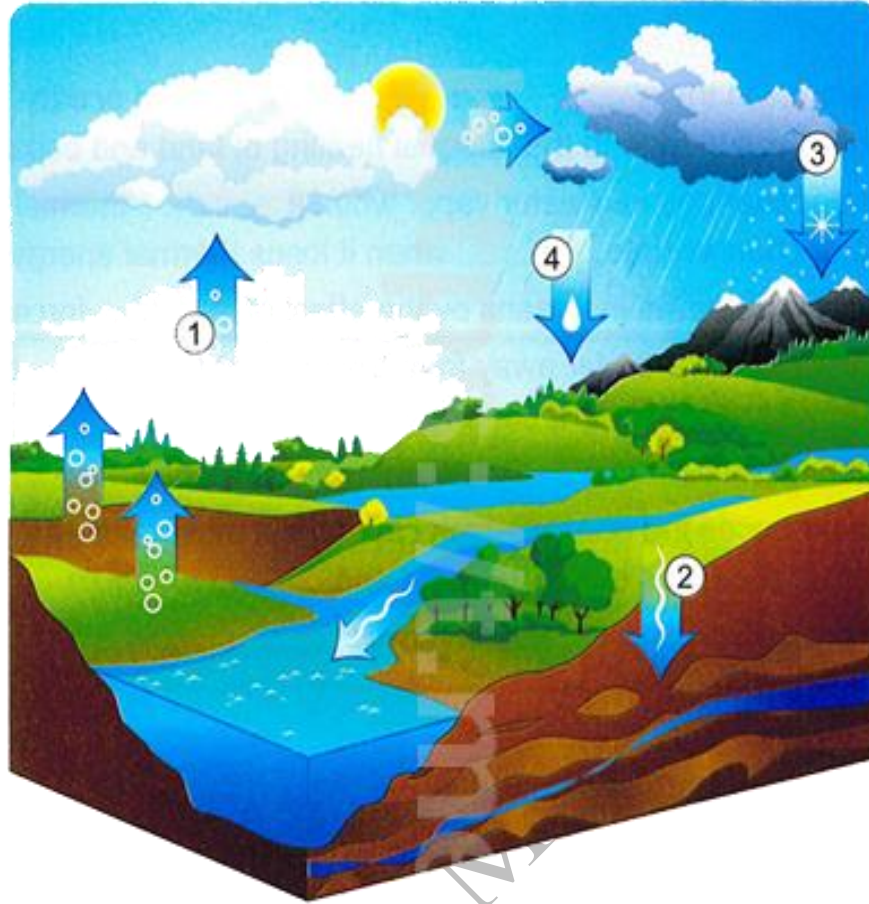
If the solar energy increases the rate of transpiration will increase

Look at the opposite figure and complete the following sentences:

1. Areas ... **C** ... and ... **D** ... are considered as hottest areas.
2. Areas ... **B** ... and ... **E** ... are considered as moderate areas.
3. Areas ... **A** ... and ... **F** ... are considered as coolest areas.



Look at the opposite figure and put (✓) or (X):



1. Arrow number ① indicates lose of thermal energy.
2. Arrow number ② indicates the effect of the gravitational force on water.
3. Arrow number ③ represents precipitation process.
4. Arrow number ④ indicates gain of thermal energy.

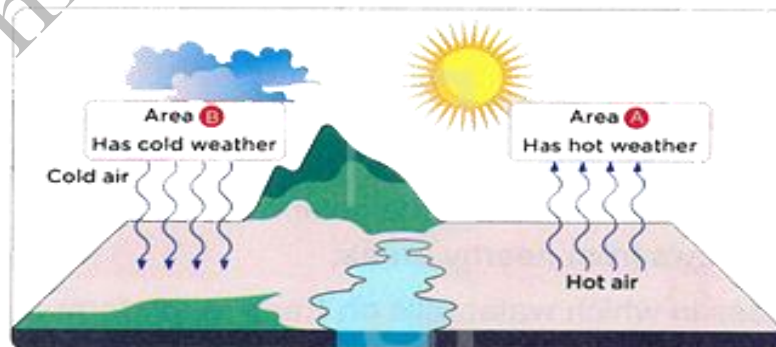
X

✓

✓

X

Look at the opposite figure and complete the following sentences:

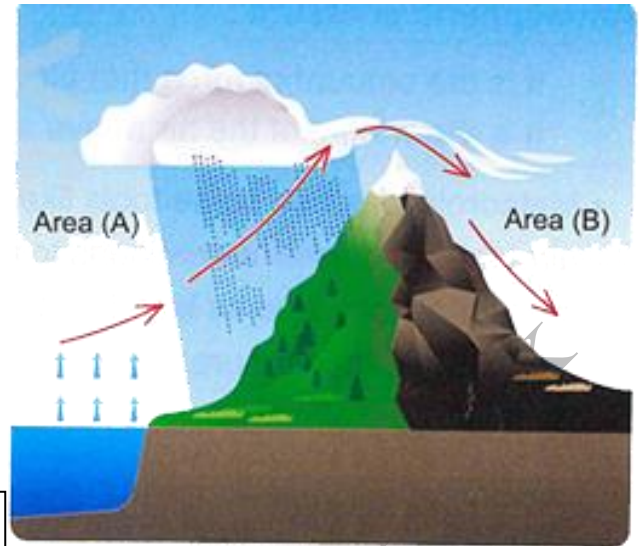


(more – solar radiation – loses – less)

1. Air in area (A) moves upward, because it has **less** density.
2. Air in area (A) becomes hot by the effect of **Solar radiation**.
3. Air in area (B) moves downward, because it has **More** density.
4. When air in area (A) moves to area (B), it **loses** thermal energy, so it will fall down near the Earth's surface.

Look at the opposite figure and complete the following sentences:

1. The air is dry in area **B**
2. The air is humid in area **A**
3. The air descends and becomes warm in area **B**
4. The air encounters the mountain range then rises and cools in area **A**
5. Evaporation, condensation and precipitation processes occur in area **A**



In the picture in front of you:

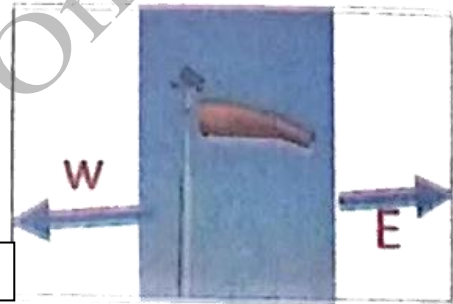
a- The wind direction is the direction of the letter **E**

b- The wind direction is determined by two factors:

Rotation of Earth

.... and

Amount of solar radiation



Observe the picture then answer the questions:

- 1- The device shown in the picture is used in .. **Anemometer**
- 2- Weather is affected by many factors, including
(topography – green space – water bodies – **all the previous**)
- 3- Atmospheric pressure as we rise above the
surface of the earth. (increases – **decreases**)



حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر مارس



Review

on Concept (3.1)

1 Scientific terms (Definitions)

Scientific terms	Definitions
1. Evaporation process process:	It is the process in which matter changes from liquid state to gas state.
2. Condensation process process:	It is the process in which matter changes from gas state to liquid state.
3. Precipitation process process:	It is the process in which water falls on Earth in the form of rain, sleet, snow or hail.
4. Runoff :	It is the step in which water flows along Earth's surface into a river and then into the ocean or sea.
5. Collection:	It is the step in which water flows along Earth's surface into a river and then into the ocean or sea.
6. Water cycle:	It is the continuous movement of water among different water reservoirs.
7. Water reservoirs:	They are storage locations of water on Earth.
8. Transpiration :	It is a type of evaporation that takes place through the stomata on the plant's leaves.

2 Give reasons for:

- 1. Drying up of the large salt lake in Turkey in summer season.**
Due to the increase in the evaporation of the lake water.
- 2. Formation of fog in the early morning.**
Due to condensation of water vapor that is found in the air.
- 3. Changing of water from one state to another.**
Due to gaining or losing of thermal energy.
- 4. Moving down of glaciers from the top of a mountain to its foot.**
Due to the effect of gravity on glaciers.

Give reason

5 Changing of some amount of water in water bodies into water vapor.

Due to evaporation process, as a result of gaining of thermal energy.

6 About 10% of water vapor in air comes from plants.

Due to transpiration process which happens by plants.

7 Formation of clouds in the sky.

Due to **condensation** of water vapor into water droplets that attach to particles of dust or smoke in the air.

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8 Hot air moves upward above cold air.

Due to the effect of **convection**, where hot air has less density, so it rises upward, while cold air has more density, so it falls down.

9 The weather in the area near the equator is hot.

Because the sun rays fall perpendicular on Earth's surface giving high effect of heat.

10 The effect of heat is low in the area at the north and south of the equator.

Because the sun rays fall semi-inclined on Earth's surface of these areas, so the weather is cool.

11 The difference in temperatures and densities in water of oceans and atmosphere.

Because the heat of the Sun causes unequal heating of land and oceans.

12 The water cycle is very important for all living organisms on Earth's surface.

Because it provides water for all living organisms and regulates weather on Earth.

13 On adding warm water to cold water without shaking, the warm water stays above cold water without mixing.

Due to the effect of convection, as warm water has less density than cold water, so warm water will stay above cold water.

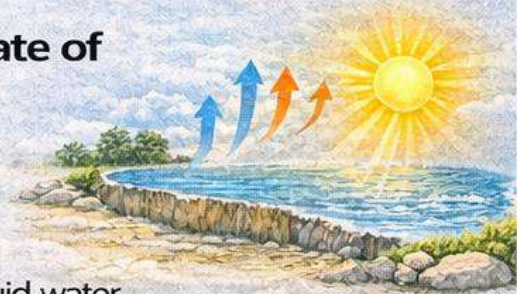
14 The formation of wind is determined by the amount of solar radiation received by Earth.

Because warm air rises upward when it is heated by solar radiation and it is replaced by cooler air that flows from nearby areas.



What happens if?

- 1** The level of water in a lake when the rate of evaporation increases.
→ **Result:** The level of water will decrease.
- 2** The snow when sunlight falls on it.
→ **Result:** The snow melts and changes into liquid water.
- 3** Water of seas and oceans if it gains a large amount of thermal energy.
→ **Result:** Water changes into water vapor in the air.
- 4** If you cover some leaves in a plant with a plastic bag and put the plant in direct sunlight for a while.
→ **Result:** Water droplets will form inside the bag.
- 5** Moist air when it touches a cold bottle of water.
→ **Result:** Water vapor in the air condenses on the sky.
- 6** Water vapor in the air when it condenses in the sky.
→ **Result:** Clouds are formed in the sky.
- 7** The water droplets in the clouds when they become very heavy.
→ **Result:** Water droplets fall in the form of rain.
- 8** The weather if the sun rays fall very inclined on an area.
→ **Result:** The weather becomes very cold.
- 9** The density of air if cold air is warmed by the effect of solar energy.
→ **Result:** The density of the air decreases (becomes low).
- 10** The air temperature if there is no wind on Earth.
→ Regions around the equator become extremely hot and the poles completely freeze.
- 11** The movement of air when solar radiation heats up the air in an area.
→ **Result:** The air moves upward in this area.



Important drawings

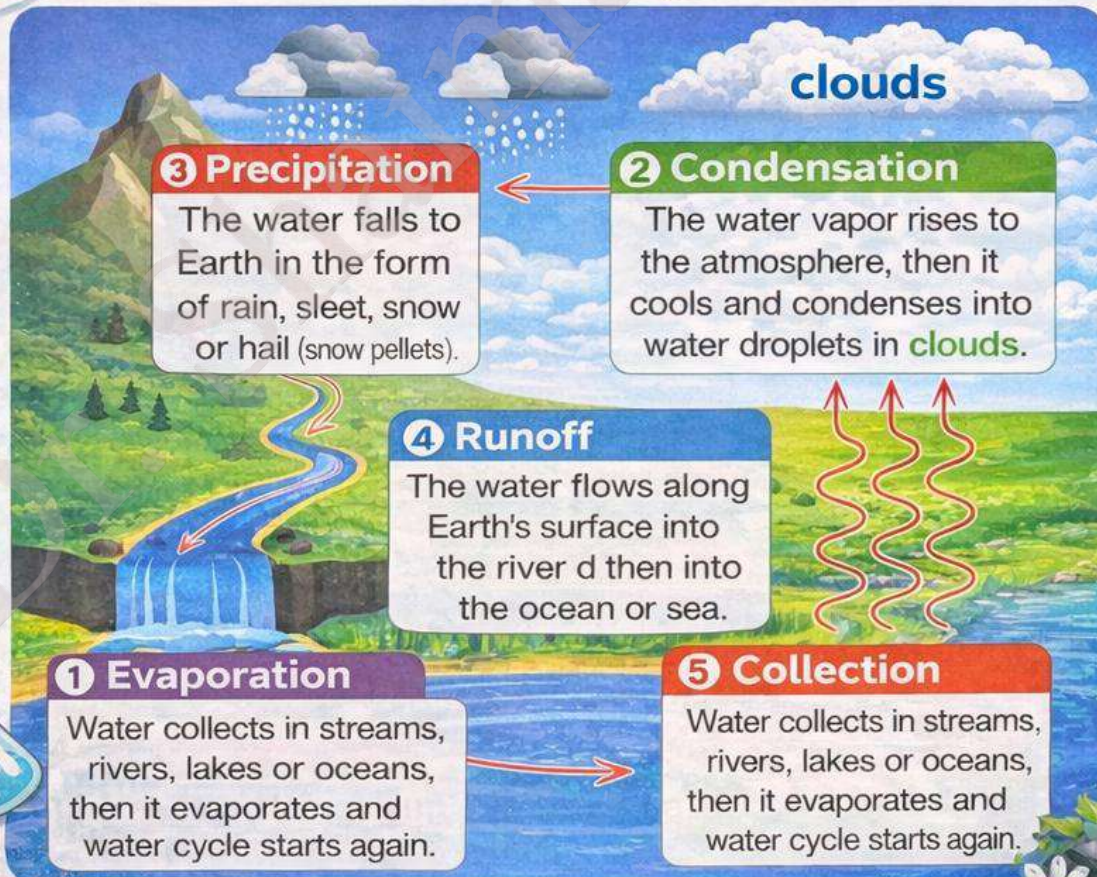


Convection currents



Convection currents

The Water Cycle





Water Cycle – Key Summary



1 Importance of the Sun

The Sun is the main energy source that drives the water cycle.



2 Energy Transfer

Energy transfer in the water cycle can increase or decrease water levels in some lakes.



3 Distribution of Solar Energy

The distribution of solar energy on Earth affects the rate of evaporation, so regions are classified into:

 **Hottest regions:** Evaporation is highest.

 **Moderate regions:** Evaporation is moderate.

 **Cooler regions:** Evaporation is lowest.



4 Water Reservoirs on Earth

Water is stored in several reservoirs, including:

 **Oceans, seas**

 **lakes**

 **Rivers**

 **Glaciers**

 **Soil**

 **living organisms**

 **Rocks**

 **atmosphere**

5 Main Water Cycle Processes

Water moves between reservoirs through these processes:

 **Evaporation**

 **Condensation**

 **Precipitation**

 **Runoff**

 **Collection**



 **All stages of the water cycle depend on energy and natural forces.**





Water Cycle – Energy and Forces (Summary)



1 Role of the Sun

Sunlight (solar radiation) provides thermal energy that causes changes in the state of water during the water cycle.



2 Role of Gravity

Gravity moves water on Earth by causing:



Precipitation: Water droplets and ice crystals fall from clouds to Earth.



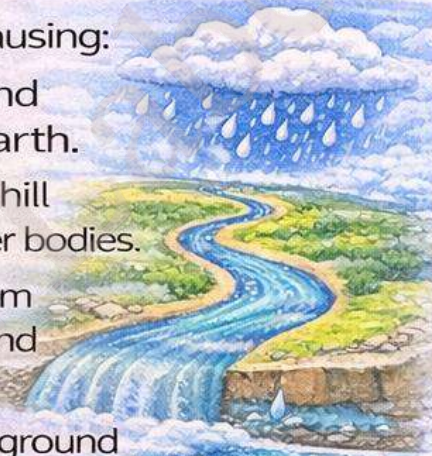
Surface flow: Water moves downhill into streams, rivers, and larger water bodies.



Glacier movement: Ice moves from higher to lower elevations, melts, and flows into soil or water bodies.



Infiltration: Water seeps into the ground forming groundwater reservoirs.



3 Other Forces Affecting Water Movement

Wind energy also helps move water in the water cycle.



4 Processes Related to Thermal Energy

When water **loses thermal energy**:



Condensation and freezing occur.

When water **gains thermal energy**:



Melting, evaporation, and transpiration occur.



5 Transpiration in Plants

About 10% of water vapor in the atmosphere comes from **plant transpiration**.

When solar energy increases, the rate of transpiration in plant leaves increases.





Weather, Heat Transfer, and Convection — Key Summary



1 Cloud Formation

Clouds form when water **vapor condenses** into water droplets that attach to particles such as dust or smoke in the air.

When many droplets join together, **clouds** are formed.



2 Heat Transfer from the Sun

The Sun's heat reaches Earth's atmosphere mainly by **radiation**.

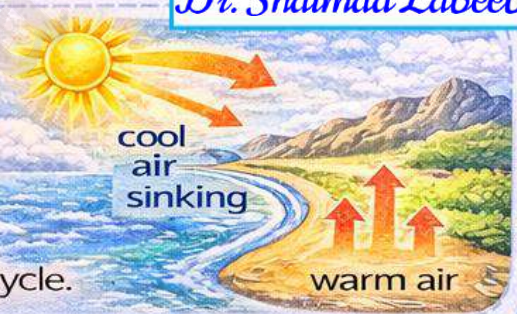
Heat is then distributed within the atmosphere by **convection currents**.



3 Convection Currents

Unequal heating of land and oceans causes differences in temperature and density in air and water.

Convection currents influence the regional climate and affect the movement of water in the water cycle.



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4 Convection in Liquids and Gases

When a liquid or gas is heated, it **expands**, becomes less **dense**, and rises **upward**.

Cooler, denser liquid or gas moves **downward** to replace it.

This continuous movement forms **convection currents**, which help create winds and ocean currents.



5 Effect of Sun Rays on Temperature

Perpendicular rays (near the equator): concentrated heat → **hot weather**.

Semi-inclined rays: spread over a larger area → warm weather.

Very inclined rays (far from the equator): → weakest heating → **very cold weather**.



6 Role of Wind

Wind is a major factor in determining weather and climate. Changes in wind lead to changes in daily weather conditions.

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Wind Formation and Movement

– Key Summary

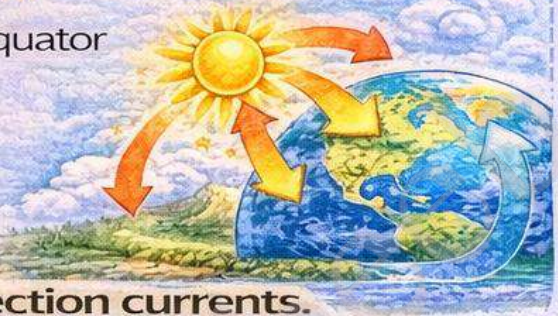


1 Unequal Heating of Earth

Unequal heating between the equator and the **poles** creates wind.

Warm air rises near the equator and moves **toward** the poles, while **cold** air sinks near the poles and moves toward the equator.

This circulation is known as **convection currents**.



2 Role of Wind

Wind moves air **masses containing water vapor** from one place to another.



3 Factors Affecting Wind Direction

Wind direction depends on:

- The **amount of solar radiation** reaching Earth.
- The **rotation** of the Earth.



4 Process of Wind Formation

Wind forms when warm air rises due to **solar heating** and is replaced by cooler air from nearby areas.



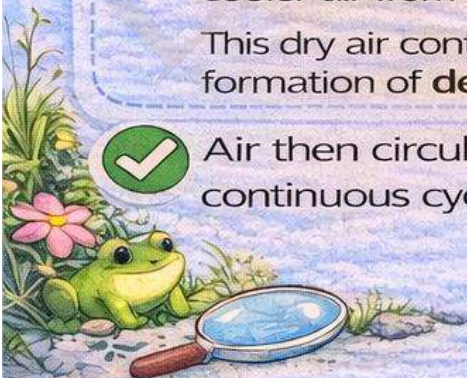
5 Process of Wind Formation

Wind forms when warm air rises due to **solar heating** and is replaced by cooler air from nearby areas.

This dry air contributes to the formation of **desert regions**.



- ✓ Air then circulates and returns again, forming a continuous cycle of air movement on Earth.



Weather Science Review

♥ Concept (3.2)

1

Scientific Terms (Definitions)



Meteorology

The science that studies and predicts the weather.



Meteorologist

A scientist who uses tools and instruments to study and forecast weather.



Atmospheric Pressure

- The force that air exerts on its surroundings.
- It is the weight of the air above a certain area.



Humidity

- A measure of how much water vapor is present in the air.



Drought

- A shortage of water available for drinking, growing crops, farming animals, and industry.



Flood

- An increase in water flow that causes rivers to overflow their banks and spread onto nearby land.

2

Importance of Weather Instruments.



Thermometer

Measures temperature.



Barometer

Measures atmospheric pressure



Anemometer

Measures wind speed.



Weather Radar

Detects the intensity and speed of precipitation. Tracks thunderstorms and hurricanes.



Give Reasons for

Concept (3.2)

1 Give reasons for :

1. Desert farming faces many difficulties.

Because the desert's climate is hot and the amount of water is small.

2. The land of the side of a coastal mountain range that is away from the coast is usually dry.

Because the air descends on this side and becomes warm causing dryness of the land.

3. Hot air moves up, while cold air moves down.

Because the hot air has low density, while the cold air has high density.

2 Scientific Reasons for:

4. In the summer days at noon, we may not be able to stand barefoot on the sand of a beach but we can swim in the sea water.

Because sand is heated up faster than sea water.

5. Sometimes meteorologists could not predict the weather of next days.

Due to unexpected quick changes in weather conditions.

6. The thermometer in weather balloon.

To measure temperature at different altitudes.

7. When air is heated, it expands.

Because the molecules of air move away from each other.

8. Convection currents in the atmosphere are considered as vertical movements of air.

Because convection currents occur when hot air rises up and cold air falls down.

9. The bigger and heavier water droplets

Due to strong condensation.

10. Extreme weather phenomena become more stronger in many places around the world.

Due to global climate change.



1. Desert farming faces many difficulties.

Because the desert's climate is hot and the amount of water is small.

2. The land on the side of a coastal mountain range that is away from the coast is usually dry.

Because the air descends on this side and becomes warm causing dryness of the land.

3. Hot air moves up, while cold air moves down.

Because hot air has low density, while cold air has high density.

4. In the summer days at noon, we may not be able to stand barefoot on the sand of a beach, but we can swim in the sea water.

Because sand is heated up faster than sea water.

5. Sometimes meteorologists could not predict the weather of the next days.

Due to unexpected quick changes in weather conditions.

6. We put a thermometer in a weather balloon.

To measure temperature at different altitudes.

7. When air is heated, it expands.

Because the molecules of air move away from each other.





Give reason



8. Convection currents in the atmosphere are considered vertical movements of air.

Because convection currents occur when **hot air rises up** and **cold air falls down**.

9. The bigger and heavier water droplets fall down to Earth's surface causing precipitation.

Due to gravity force.

10. Extreme weather phenomena became stronger in many places around the world.

Due to global climate change.

11. Floods have some benefits.

Because some ecosystems depend on **floods** such as ecosystems along the Nile.

12. Sandstorms have harmful effects on human health.

Because sandstorms harm the human eyes and respiratory system.

13. Flooding is more dangerous if the ground is frozen.

Because the ground cannot absorb the water.

14. It is easy to see a sandstorm from a long distance.

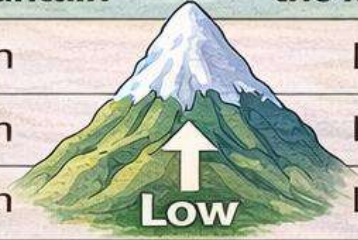
Because it extends for several kilometers and its height may reach hundreds of meters.



5 Comparison:

Properties of the atmosphere at the top and at the bottom of a mountain:

The properties	At the bottom of the mountain	At the top of the mountain
The atmospheric pressure :	High	Low
The air temperature :	High	Low
The air density :	High	Low



Properties of Deserts



Rainfall

Deserts receive about **250 mm** of rain per year. This is the lowest rainfall compared to other biomes.



Weather: Deserts have very hot and dry weather.

Farmers must adapt to this climate and use special methods to save water.



Farming in Deserts:

Farming is difficult because:

- High temperature
- Very little rainfall
- Evaporation is greater than precipitation



Result:

- More water evaporates than the amount of rain that falls.



What happens if?

1. **The atmospheric pressure**, as we move up toward the top of a mountain.

The atmospheric pressure will decrease.

2. **The air density**, as we move down toward the bottom of a mountain.

The air density will increase.

3. **The temperature of water inside a beaker** if we put it under a lighted lamp for 15 minutes.

The temperature of water will increase.

4. **The temperature of hot sand** in a desert at night.

The temperature of desert sand will decrease.

5. **The water movements** when boiling it in a pot.

Hot water moves up and cold water falls down.

6. **The water droplets** in clouds when they become bigger and heavier. **They fall down** to Earth's surface due to gravity.

7. **The water droplets** in clouds when **air is cold** enough.

They change into ice crystals that fall to Earth's surface.

8. **The buildings** when they are subjected to **strong floods**.

They may be damaged by moving or breaking them.

9. **The solar panels** when **dust accumulates** on them.

Solar panels stop generating energy.



Farming in Deserts



Soil:
Improve soil
quality



Crops:
Grow heat &
drought-tolerant
plants



Water:
Use modern irrigation
& reuse water



Energy:
Use solar energy
& wind turbines

Rain Shadow Phenomenon

Wet Side

Warm moist air rises →
Cools → Rain Falls



Dry Side

Away from the Coast):

Air descends → Warms up
→ Land Becomes Dry



Weather Prediction

Meteorologists predict weather through 3 main steps:

1 Collecting Data



Tools: Satellites | Airplanes
| Weather Balloons

2 Analyzing Data

Study temperature,
pressure, humidity & air
movement



2 Prediction

Use computer models
& environmental factors
to forecast weather





Sand vs Water Heating



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Sand heats faster than water.

Sand cools faster than water.

This difference changes the air temperature above land and water.

Air Movement

Warm air rises up



◆ Vertical air movement

→ **Air Current**

Temperature differences affect:

Cold air moves down



◆ Horizontal air movement

→ **Wind**

Wind speed  Wind direction

Drought

Drought occurs when an area experiences very dry weather for a long time.

Harm:

- ◆ Lack of water for people, plants, and animals.



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Floods

Causes

- ◆ Heavy rainfall
- ◆ Melting snow and ice

Harms

- ◆ Damage to buildings
- ◆ Death of people and
- ◆ Economic losses

15

How Precipitation Occurs

- Small water droplets form in clouds.
- Droplets become bigger and heavier
- Gravity pulls them down → precipitation (rain).

❄️ **Snow** forms when cloud air is very cold, turning droplets into ice crystals.

Floods

Benefit:

- Support some ecosystems (e.g., along the Nile River).



Sandstorms

- **Cause:** Strong winds lift sand and dust from dry desert areas.
- **Characteristics:**
 - ◆ Can extend several kilometers
 - ◆ May reach hundreds of meters high

⚠️ Harms of Sandstorms:

- 🚗 Reduce visibility while driving
- ☀️ Cover solar panels, reducing energy production
- 💧 Pollute irrigation canals
- ✈️ Damage airplane engines
- 👁️ Harm eyes and respiratory system





Water Cycle – Review Questions

Page 17

1 Complete the following:

1. The two main factors for the water cycle are _____ and _____.
2. Water state changes in the water cycle by _____ energy and _____ energy.
3. Snow falls during the process of _____.
4. The _____ causes water to seep into the ground.
5. Water moves on Earth among _____.
6. Water changes into vapor during the _____ process.
7. There are three main stages that make up the water cycle: _____, _____ and _____.
8. Evaporation is the change of the _____ state to _____.
9. The transpiration rate represents _____ % of the ratio of water vapor in the air.
10. The transpiration rate represents _____ % of the ratio of water vapor in the air.
11. _____ occurs when large numbers of water droplets combine together.
11. Cold gases are _____ dense than warm gases.
12. _____ air forms deserts.
13. Regions near the _____ are very hot.

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17



2 Complete the following:

14. One of the devices used to carry measuring instruments is the _____.
15. One of the characteristics of desert soil is a _____ fertility soil.
16. Air pressure at the top of the mountain is _____ than air pressure at the bottom.
17. The lake's water level drops as a result of _____.
18. The main source affecting the water cycle is _____.
19. Humid air contains a large amount of _____.
20. When a gas or liquid is heated, its density _____ air rises upwards.
21. Areas near the equator have a more _____ climate.
22. The _____ is considered the main driver of wind on Earth.
23. Wind direction is determined by two factors: _____ and _____.
24. The condensation process is accompanied by a _____ of energy.
25. Meteorologists use a _____ instrument to track thunderstorms and hurricanes.

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**2****Write what the following statements indicate**

1. A process that causes entering water to the atmosphere in the form of water vapor. _____)
2. A process by which plants get rid of excess water in the form of water vapor through stomata. _____)
3. A location on Earth where water is stored including oceans, seas, lakes, rivers and soil. _____)
4. The transformation of water vapor into liquid as a result of a decrease in temperature. _____)
5. The movement that occurs when warmer less dense molecules rise and cooler denser molecules sink.
6. The science of studying and predicting weather. _____)
7. The force exerted by air on the surrounding environment or the weight of a column of air above an area. _____)
8. A severe shortage of available water in a place. _____)
9. Strong winds carrying sand and dust from a very dry area. _____)
10. The rise of water levels above a riverbank and its subsequent flooding of surrounding lands. (____)
11. A scientist who uses a variety of instruments to study and predict weather. _____ (____)
12. The state of the weather over a long and extended period. (____)
13. The sudden flooding of land. (____)
14. A phenomenon that occurs when winds pass through mountain ranges. _____ (____)
15. A device that records wind speed. _____ (____)
16. A device that determines the magnitude and speed of rainfall and tracks thunderstorms and tornadoes. (____)
17. A device that records the amount of rainfall in a specific area. _____ (____)
18. The amount of force that air exerts on the surrounding environment. _____ (____)

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3 What happens when

1. Sunlight falls perpendicularly on the Earth's surface.

.....

2. The air near the Earth's surface is heated.

.....

3. Increasing evaporation of lake water.

.....

4. Water falls on the Earth.

.....

5. The air cools and water vapor condenses in the sky.

.....

6. Very dry wind blows over an area of land.

.....

7. The ice melts suddenly.

.....

8. The amount of water vapor in the air increases.

.....

9. Accumulation of dust over solar panels.

.....

10. The weather is dry for a long time.

4 Give Reason

1 Living organisms are considered reservoirs on the Earth's surface



2 Water and ice crystals are returned to Earth by clouds.



3 Water seeps into the Earth's interior.



4 Flamingos migrate to warmer climates.



5 The water cycle is a continuous process.



6 Hot air rises.



7 The amount of water in nature is constant.



8 Water bodies are called reservoirs.



9 Evaporation and condensation are opposite processes.



10 Snow forms on high mountain peaks.



11 Atmospheric properties differ at the mountain's summit compared to its base.



12 The regions near the equator are very hot.



13 Snow forms at the top of mountains while water remains liquid at the bottom.



5

Correct the Incorrect Statements

ضع خط تحت الكلمة الخاطئة وصححها.

1 Runoff is the flow of water beneath the Earth's surface after precipitation.



2 Climate change does not affect the water cycle.



3 Climate change does not affect the water cycle.



4 Small lakes dry up as a result of precipitation.



5 The wind is formed by cold air rising upward then replaced by hot air.



6 Convection currents move horizontally.



7 Warm moist air is denser than cold air.



8 Heavy rains cause the destruction of ecosystems.



9 Heavy rains cause the destruction of ecosystems.



9 Drought is a rise in water level above the riverbank.



6

Mention

1 The stages of predicting weather.



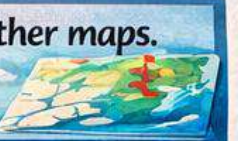
2 The main stages of the weather forecasting process.



3 The importance of weather balloons.



4 The importance of weather maps.



5 The negative effects of sandstorm blowing.



1 _____ is used to determine wind speed.

- ☐ anemometer ☐ barometer ☐ radar ☐ thermometer



2 _____ is the amount of water vapor present in the air.

- ☐ air density ☐ atmospheric pressure ☐ humidity



3 The density of air molecules increases at the _____ of a mountain.

- ☐ summit ☐ top ☐ slope ☐ midpoint



4 One of the devices used to carry measuring instruments is the _____

- ☐ thermometer ☐ weather balloons ☐ rain gauge ☐ barometer



5 _____ affects weather and climate.

- ☐ mountains ☐ soil type ☐ bodies of water



6 _____ affects weather and climate.

- ☐ mountains ☐ soil type ☐ bodies of water ☐ all of the previous



7 _____ can be described as very fast.

- ☐ air density ☐ wind ☐ humidity ☐ temperature



8 The state of the atmosphere over a short period of time is _____

- ☐ humidity ☐ weather ☐ climate ☐ clouds



8 _____ can write a report on the weather.

- ☐ firefighter ☐ meteorologist ☐ astronaut ☐ pilot



9 Sandstorms occur in _____ regions.

- ☐ polar ☐ coastal ☐ desert ☐ glacial



10 All of the following are damages caused by floods except, _____

- ☐ disruption of economy ☐ damage to buildings ☐ drowning of livestock
☐ moderation of the weather

8

Put (✓) or (✗)



1 Flamingos migrate to a salt lake in Turkey but it suddenly dries up.



2 Flamingos feed on algae found in freshwater lakes.



3 Climate change affects the breeding grounds of flamingos.



4 Energy from the sun is distributed in the same quantity across the Earth's surface.



5 Cold air replaces hot air.



6 The rate of transpiration from plant leaves decreases in the morning.



7 Water vapor gains energy during the condensation process.



8 The water cycle is the movement of water between different bodies of water.



10 Hot air is denser than cold air.



11 Convection currents move vertically.



12 Using solar panels is one way to improve agricultural methods.



13 Rain shadow occurs on the windward side.



14 Atmospheric pressure decreases as altitude increases.



15 Weather is the state of the atmosphere over a long period of time.



16 Sand loses heat faster than water.



17 Solar energy is distributed equally across the Earth's surface.



18 Cold air is denser than hot air.



19 Floods occur as a result of severe dry sandstorms.



20 Knowing humidity and wind speed are elements of weather.



21 Warm air becomes denser due to expansion of its molecules.

Model Exam 1 on Concept 3.1

Primary **6** - Science — February Revision

Time : 1 Hour — Marks : 20

1 (A) Correct the underlined word:

- In coolest regions, the rate of evaporation would be the highest.

(.....)

1 (B) Write scientific term:

1. It is the process carried out by plant leaves to get rid of excess water through stomata. (.....)
2. It is the process in the water cycle that follows the condensation process. (.....)
3. It is the step in the water cycle in which water flows along the Earth's surface into streams or rivers, then into seas or oceans.
4. It is the force that is responsible for the falling of different forms of precipitation on Earth's surface. (.....)

2 (A) Cross out the odd word:

- Sleet – Snow – Rocks – Hail

(B) What happens:

1. If water vapor in air hits a cold bottle of water?
2. To the density of cold air when it is warmed by the effect of solar energy?
3. To the level of water in a lake when the rate of evaporation increases?
4. If sunrays fall semi-inclined on an area on Earth's surface?

2 (A) Cross out the odd word:

- Sleet – Snow – Rocks – Hail

Model Exam 1 on Concept 3.1

Primary **6** Science – February Revision

Time : 1 Hour – Marks : 20

3 (A) Put (✓) or (X):

- Moist air causes the formation of large areas of deserts around the Earth's surface. ()
- The amount of solar radiation that reaches any area on the Earth's surface is unequal. ()

3 (B) Complete the following sentences:

1. When the air is heated, it moves
2. When water changes from solid to liquid state it energy.....
3. and are the two factors that determine the wind direction.)

4 (A) Choose the correct answer:

1. energy is the energy that drives the water cycle.
(A) Potential (B) Sound (C) Solar (D) Electrical
2. Flamingos feed on
(A) insects (B) worms (C) algae (D) grasses

4 (B) Give a reason for:

1. Drying up of a shallow lake in the summer season.
.....
2. Living organisms take part in the water cycle in nature.
.....
3. Formation of clouds in the sky.
.....

Model Exam 2 on Concept 3.1

Primary **6** Science — February Revision

Time : 1 Hour — Marks : 20

1 (A) Choose the correct answer:

- On heating some water, hot water molecules will move they are dense.

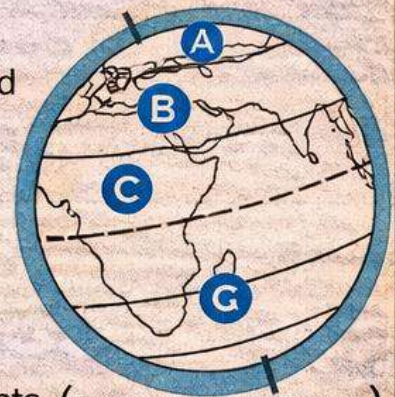
- (A) upward – more (B) downward – more
(C) upward – less (D) downward – less

1 (B) Answer the following:

- What's meant by "water reservoir"?
- Mention two forms of precipitation?
- Mention one difference between evaporation process and condensation process.
.....

4. In the opposite figure:

Mention which letter represents the region with humid and hot weather, with giving a reason to your answer?
.....
.....



2 (A) Correct the underlined word:

- About 20% of water vapor in air comes from plants. (.....)

(B) Write the scientific term:

- It is the continuous movement of water between the Earth's surface and the atmosphere. (.....)
- It is the force that drives the water cycle.
- It is the method by which heat of the sun transfers from space to Earth.
- It is the main factor that determines weather and climate.
.....

Model Exam 2 on Concept 3.1

Primary **6** Science – February Revision

Time : 1 Hour – Marks : 20

3

(A) Complete the following sentences using the words between brackets:

(Radiation – Wind – Convection currents)

1. occur(s) in liquids and gases.
2. is created when air warmed by the sun is replaced by a cooler air form a nearby area.

(B) Give a reason for:

1. Warm air rises upward above cold air.
2. Falling of ice in glaciers from a higher altitude to a lower altitude.
3. Formation of fogs over a field in the morning.

4

(A) Put (✓) or (X):

1. In transpiration process, water changes from gas state to liquid state. ()
2. Clouds are formed due to the condensation process. ()

(B) What happens if:

1. Cold water is placed over hot water?
2. The clouds become so heavy that they can't hold water?

4

(B) What happens if:

1. Cold water is placed over hot water?
2. The clouds become so heavy that they can't hold water?

Model 1 on Concept 3.2

Primary **6** Science – February Revision

Time : 1 Hour – Marks : 20

1 (A) Cross out the odd word:

- Anemometer – Rain gauge – Barometer – Thermometer (.....)

(B) Mention the importance of each of the following:

1. Rain gauge
2. Barometer.
3. Anemometer.
4. Thermometer.

2 (A) Correct the underlined word:

- Meteorology is the science of studying and predicting weather. (.....)
(.....)

2 (B) Write the scientific term:

1. This is the side of mountain ranges at which rain shadow phenomenon is formed.
2. It is the amount of water vapor in the air.
3. It is the amount of force that air exerts on the surrounding environment.
.....
4. It is a natural phenomenon that occurs due to a shortage of water caused by extremely high temperatures in an area for a long time.
.....

Model 1 on Concept 3.2

Primary **6** Science – February Revision

Time : 1 Hour – Marks : 20

3

(A) Choose the correct answer:

1. If the temperature of the seawater at night is 23°C , so the temperature of the sand of the shore could be:

- (a) 30°C (b) 20°C (c) 26°C (d) 24°C

2. occurs when the level of water in a river increases until it overflows its banks:

- (a) Sandstorm (b) Flooding (c) Drought (d) Dust storm

(B) Give a reason for:

- Farming is difficult in the desert biomes.
- When hot air loses its heat, it descends.
- The dangers of flooding increases if the land is frozen.

4

(A) Put (✓) or (X):

- In deserts, the amount of water that evaporates is less than the amount that precipitates. ()
- The density of air decreases, when its temperature increases. ()

(B) What happens to:

- The visibility of car drivers during a sandstorm?
.....
- The atmospheric pressure, as we move down toward the bottom of a mountain?
.....
- The temperature, as we move up towards the top of a mountain?
.....

Model 2 on Concept 3.2

Primary **6** - Science – February Revision

Time : 1 Hour – Marks : 20

1

(A) Choose the correct answer:

- In convection currents, warm air is, so it

- (a) less dense – sinks (b) more dense – rises
(c) less dense – rises (d) more dense – sinks

(B) Write the scientific term:

1. It is the device that is used to measure the intensity of precipitation.

..... (.....)

2. The scientist that uses the variety of tools instruments to study and forecast weather.

(.....)

3. It is the weight of the air above an area.

(.....)

4. It is the weather condition for a long period of time.

.....

2

(A) Correct the underlined words:

- Weather balloon is used to track the path of thunderstorms and hurricanes.

..... (.....)

(B) Give a reason for:

1. Flooding may have a bad impact on buildings.

.....

2. Atmospheric pressure decreases on mountains top.

.....

3. Extreme weather conditions are increasing in many areas around the world.

.....

4. Snow is formed on the top of some mountains.

.....

01093351243

Dr. Shaimaa Labeel

Model 2 on Concept 3.2

Primary **6** Science – February Revision

Time : 1 Hour – Marks : 20

3 (A) Put (✓) or (X):

1. The horizontal movement of air along the Earth's surface is called air current. ()
2. By increasing the amount of water vapor in air, humidity increases. ()

Dr. Shaimaa Labeeb

(B) What happens:

1. To the density of air when its temperature increases?
2. If dust accumulates on solar panels?
3. If the water droplets in clouds become too heavy that clouds can't hold them?

4 (A) Complete the following table using the words between brackets:

(Drought – Flood – Sandstorm)

Phenomenon	(1)	(2)
Harm(s)	It harms the human's respiratory system.	Drowning of people and animals.

(B) Answer the following:

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1. Mention the steps of studying the weather.
.....
2. Mention one reason for the occurrence of sandstorms.
.....
3. Mention the name and the importance of the device in the opposite figure.
.....



Model 3 February Revision

Primary **6** Science

Time : 1 Hour – Marks : 15

1 (A) Choose the correct answer :

- The density of cold dry air is that of hot humid air.
a. equal to b. similar to c. less than d. more than
- Floods may occur as a result of
a. gentle rain – melting of snow.
b. gentle rain – freezing of water.
c. heavy rain – sudden melting of snow.
d. heavy rain – little evaporation of water.
- Precipitation process in the water cycle is usually followed by two steps which are and
a. runoff – evaporation. b. collection – melting.
c. runoff – collection. d. melting – freezing.
- Heat transfers through and gases by
a. liquids – radiation. b. liquids – convection.
c. solids – convection. d. solids – radiation.

(B) Give a reason for the following :

When air is heated, it expands.
.....

2 (A) Write the scientific term of each of the following :

- It is a natural phenomenon in which extreme dry and hot weather affect an area for a long period of time. (.....)
- The scientist who studies the atmosphere to understand Earth's weather. (.....)
- It is a type of evaporation that takes place through the stomata on the plant's leaves. (.....)
- It is the continuous movement of water among different water reservoirs. (.....)

(B) What happens to ...?

- The atmospheric pressure, as we move up toward the top of a mountain.
.....

3 (A) Put (✓) or (x) :

(5 marks)

1. Rain gauge is used to measure the amount of rain in a certain area. ()
2. Mapping data means representing data about weather conditions on a map. ()
3. During the water cycle, condensation of water vapor occurs after precipitation process. ()
4. Deserts are formed by the effect of moist air. ()

(B) Mention two harms of sandstorms:

.....

.....

Model 3

1 (A) Complete the following sentences :

(5 marks)

1. Convection currents move in direction. ()
2. At night, the sand of the seashore cools off than the sea water. ()
3. Dry air causes the formation of large areas of around Earth's surface, ()
4. Formation of fog is due to the of water vapor on a field in early morning. ()

(B) Choose from column (B) what suits it in column (A) :

Devices	Uses
1. Anemometer	a. measuring the atmospheric pressure.
2. Weather radar	b. measuring the speed of wind.
	c. measuring the speed and intensity of precipitation.

1.

2.

2 (A) Put (✓) or (x) :

(5 marks)

1. Although flooding is harmful, it also has some benefits. ()
2. The air becomes more dense at the top of a mountain compared to the bottom of this mountain. ()
3. States of water change when water gains or loses energy. ()
4. Due to radiation currents, warm water moves above cold water. ()

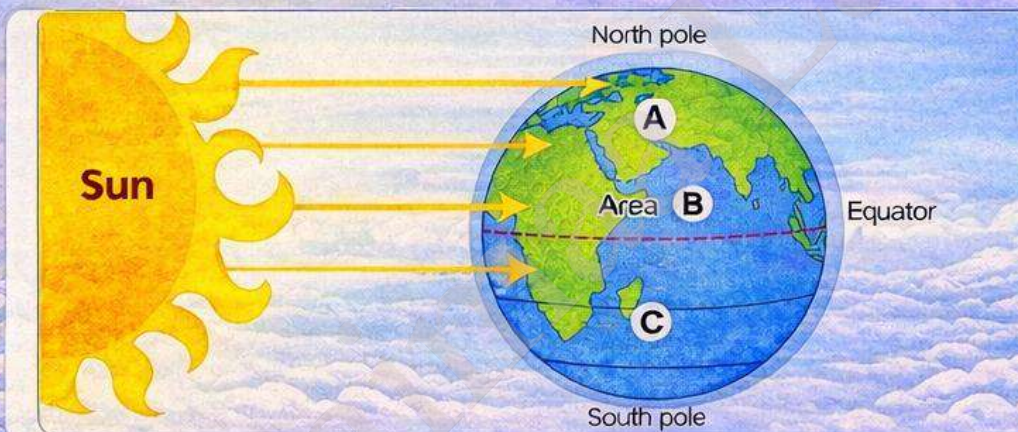
(B) Cross out the odd word:

1. Snow – Rain – Hail – Water vapor.
2. Evaporation – Transpiration – Condensation – Melting.

3 (A) Write the scientific term of each of the following: (5 marks)

1. The force that pulls big and heavy water droplets toward the ground causing precipitation.
2. The phenomenon that occurs as a result of descending warm and dry air at the dry side of a coastal mountain range.
3. It is the science of studying and predicting the weather.
4. It is the increase in the flow of water over the edges of riverbanks and onto the land around a river.

(B) Look at the following figure, then choose the correct answer:



1. The weather in area (A) is: Hot – Warm – Very Cold
2. The sun rays fall perpendicular on area: (A – B – C)

Model 4

Total mark:
15

1 (A) Complete the following sentences: (5 marks)

1. The horizontal movement of air is called
2. The change of matter from gas state to liquid state is known as
3. is used to measure the temperature.
4. Flamingos feed on that are found in the shallow water of salt lake in Turkey.

1 (B) Give a reason for the following :

Moving down off glaciers from the top of a mountain to its foot.

2 (A) Write the scientific term of each of the following : (5 marks)

1. A process in which matter changes from liquid state to gas state.)
2. The amount of force that air exerts on its surroundings. (.....)
3. A natural phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. (.....)
4. A process in which water falls on Earth in the form of rain, sleet, snow or hail. (.....)

(B) Mention the importance of :

Barometer :

3 (A) Put (✓) or (X) : (5 marks)

1. The too much precipitation may cause drought. ()
2. When water vapor cools in the sky, it forms clouds. ()
3. Sand loses heat slower than water. ()
4. Farmers may have to reuse water to deal with the problem of water shortage especially in desert lands. ()

(B) Define :

Convection :

3 (A) Define :

Convection :

Page 17

1. Solar energy and gravity
2. gaining energy and losing energy
3. precipitation
4. gravity
5. Water reservoirs
6. evaporation
7. evaporation, condensation, and precipitation
8. liquid state to gas state
9. 10%
10. 10%
11. clouds
12. more
13. dry
14. Equator

Page 18

14. weather balloon
15. low fertility soil
16. lower than
17. evaporation
18. the Sun
19. water vapor
20. decreases
21. hot
22. the Sun = solar energy
23. Amount of solar radiation and rotation of Earth
24. Release or loss
25. Weather radar

Page 19

1. Evaporation
2. Transpiration
3. Water reservoirs
4. Condensation
5. Convection current
6. Meteorology
7. Air pressure
8. Drought
9. Sandstorm
10. Flood
11. Meteorologist
12. Climate
13. Flash flood
14. Foehn wind
15. Anemometer
16. Weather radar
17. Rain gauge
18. Air pressure

Page 20

1. The area becomes very hot because it receives the most heat energy from the Sun.
2. The air expands, becomes less dense, and rises upward.
3. The water level of the lake decreases and it may dry up.
4. It flows onto the Earth's surface (runoff) and leaks beneath the ground through porous rocks to form groundwater
5. Clouds form in the sky.
6. Desert will be formed in this area.
7. Flooding may occur because of the rapid melting of ice.

8. The humidity of the air increases and clouds may form, which can lead to rainfall.
9. The efficiency of the solar panels decreases and can't generate electricity.
10. Drought occurs.

Page 21

1. Because living organisms store water in their bodies.
2. Because clouds cause precipitation such as rain, snow, or hail that returns water to Earth.
3. Because water moves through pores and cracks in soil and rocks by infiltration.
4. Because flamingos search for warmer temperatures and suitable food.
5. Because water continuously evaporates, condenses, and falls again as precipitation.
6. Because hot air expands, becomes less dense, and rises upward.
7. Because water can be renewed again in nature through the water cycle.
8. Because water bodies store large amounts of water.
9. Because evaporation changes liquid water to vapor, while condensation changes vapor to liquid.
10. Because the temperature decreases with altitude, so water freezes.
11. Because temperature and air pressure decrease as altitude increases.
12. Because the Sun's rays fall perpendicular on the equator, spread over a smaller area, giving more heat.
13. Because temperature at the mountain top is lower than at the bottom.

Page 22

5) Correct the incorrect statements

1. Groundwater
2. Climate change affects the water cycle.
3. Climate change affects the water cycle.
4. Small lakes dry up as a result of evaporation.

5. Wind is formed when hot air rises upward and is replaced by cold air.
6. Convection currents move vertically.
7. Warm moist air is less dense than cold air.
8. Heavy rains may cause floods.
9. Flood is a rise in water level above the riverbank.

6) Mention

1. The stages of predicting weather:

Collecting data – analyzing data – predicting weather.

2. The main stages of the weather forecasting process:

Collecting data – analyzing data – predicting weather.

3. The importance of weather balloons:

Carry measuring instruments high into the atmosphere to measure conditions of weather at different altitudes.

4. The importance of weather maps:

They help meteorologists analyze weather conditions and predict future weather.

5. The negative effects of sandstorm blowing:

Reduce visibility, fills up irrigation canals, and cause breathing problems.

Page 23

1. anemometer
2. humidity
3. Slope
4. weather balloons
5. bodies of water
6. all of the previous
7. wind
8. Weather
9. Meteorologist

نأخذ بالنسبة السؤال الثامن المفروض رقمه 9

10. desert

11. moderation of the weather

Page 24

1. ✓

2. X

3. ✓

4. X

5. ✓

6. X

7. X

8. ✓

10. X

11. ✓

12. ✓

13. X

14. ✓

15. X

16. ✓

17. X

18. ✓

19. X

20. ✓

21. X

Page 25

1 (A) Correct the underlined word:

hottest

1 (B) Write the scientific term:

1. Transpiration
2. Precipitation
3. Runoff
4. Gravity

2 (A) Cross out the odd word:

Rocks

2 (B) What happens:

1. Condensation occurs and water droplets form on the bottle.
2. Its density decreases.
3. The water level of the lake decreases.
4. The sun rays are distributed on a large area giving low effect of heat so the weather is warm.

2 (A) Cross out the odd word:

Rocks

Page 26

3 (A) Put (✓) or (X)

1. X
2. ✓

3 (B) Complete the following sentences

1. upward
 2. state – gains – thermal
 3. Amount of solar radiation and rotation of Earth
-

4 (A) Choose the correct answer

1. Solar
2. algae

4 (B) Give a reason for

1. Because the rate of evaporation increases due to high temperature in summer.
2. Because plants release water vapor through transpiration and animals use and return water to the environment.
3. Because water vapor cools and condenses into tiny water droplets forming clouds.

Page 27

1 (A) Choose the correct answer

- upward – less

1 (B) Answer the following

1. **A water reservoir:**

A place where water is stored on Earth, such as oceans, lakes, rivers, and groundwater.

2. **Two forms of precipitation:**

Rain and snow.

3. **One difference between evaporation and condensation:**

Evaporation (gains thermal energy) changes liquid water into water vapor, while condensation (loses thermal energy) changes water vapor into liquid water.

4. **The region with humid and hot weather:**

C, because it is near the equator where the Sun's rays fall perpendicular, causing high temperature and humidity.

2 (A) Correct the underlined word

About 10%

2 (B) Write the scientific term

1. Water cycle
2. Solar energy
3. Radiation
4. The Sun or solar energy

Page 28

3 (A) Complete the following sentences

1. Convection
2. Wind

3 (B) Give a reason for

1. Because warm air expands and becomes less dense than cold air.
2. Because of gravity pulling the ice from higher altitude to lower altitude.
3. Because water vapor cools and condenses into tiny water droplets near the ground.

4 (A) Put (✓) or (X)

1. X
 2. ✓
-

4 (B) What happens if

1. Convection currents occur; hot water rises and cold water sinks.
 2. Precipitation occurs (rain falls).
-

Page 29

1 (A) Cross out the odd word

Rain gauge (the others can measure wether conditions in the air)

1 (B) Mention the importance

Rain gauge: measures the amount of rainfall in a specific area

Barometer: measures atmospheric (air) pressure.

Anemometer: measures wind speed.

Thermometer: measures temperature of the air.

2 (A) Correct the underlined word

Meteorology (the sentence is correct, so no change).

2 (B) Write the scientific term

1. Leeward side = dry side

2. Humidity

3. Air pressure (Atmospheric pressure)

4. Drought

Page 30

3 (A) Choose the correct answer

1. 20°C

2. Flooding

3 (B) Give a reason for

1. Because deserts receive very little rainfall, poor soil quality and water is scarce.
2. Because when hot air loses heat, it becomes denser and sinks downward.
3. Because frozen land prevents water from seeping into the soil, so water flows on the surface causing floods.

4 (A) Put (✓) or (X)

1. X
2. ✓

4 (B) What happens to

1. The visibility of drivers decreases.
2. Atmospheric pressure increases.
3. Temperature decreases.

Page 31

1 (A) Choose the correct answer
less dense – rises

1 (B) Write the scientific term

1. Rain gauge
2. Meteorologist
3. Atmospheric pressure (Air pressure)
4. Climate

2 (A) Correct the underlined words

Weather Rada

2 (B) Give a reason for

1. Because floodwater can damage buildings and their foundations.
2. Because the amount of air above the mountain top is less, so air pressure decreases.
3. Because climate change increases the occurrence of extreme weather conditions.
4. Because temperature decreases with increasing altitude on mountains.

Page 32

3 (A) Put (✓) or (X)

1. X
2. ✓

3 (B) What happens

1. The density of air decreases.
2. The efficiency of solar panels decreases and stop generating electricity.
3. Precipitation occurs (rain falls).

4 (A) Complete the table

(1) Sandstorm

(2) Flood

4 (B) Answer the following

1. Collecting weather data – Analyzing the data – Predicting the weather – Presenting the forecast.
2. Strong winds blowing over dry sandy areas.
3. Device: Rain gauge
Importance: It is used to measure the amount of rainfall (precipitation)

Page 33

1 (A) Choose the correct answer

1. more than
2. heavy rain – sudden melting of snow
3. runoff – collection
4. liquids – convection

1 (B) Give a reason

When air is heated, it expands because the molecules move farther apart and the density of air decreases.

2 (A) Write the scientific term

1. Drought
2. Meteorologist
3. Transpiration
4. Water cycle

2 (B) What happens to ...?

Atmospheric pressure decreases.

Page 34

3 (A) Put (✓) or (X)

1. ✓
 2. ✓
 3. X
 4. X
-

3 (B) Mention two harms of sandstorms

Respiratory problems for humans.

Reducing visibility which may cause accidents.

Model 3

1 (A) Complete the following sentences

1. vertical
2. faster
3. deserts
4. condensation

1 (B) Choose from column (B)

1. b (measuring the speed of wind)
2. c (measuring the speed and intensity of precipitation)

2 (A) Put (✓) or (X)

1. ✓
2. X
3. ✓
4. X

2 (B) Cross out the odd word

1. Water vapor
2. Melting

Page 35

3 (A) Write the scientific term

1. Gravity
 2. Rain shadow
 3. Meteorology
 4. Flood
-

3 (B) Choose the correct answer

1. Very Cold
 2. B
-

Model 4

1 (A) Complete the following sentences

1. Wind
 2. Condensation
 3. Thermometer
 4. Algae
-

1 (B) Give a reason

Because gravity pulls the glacier ice downward from higher altitude to lower altitude.

Page 36

2 (A) Write the scientific term

1. Evaporation

2. Atmospheric pressure (Air pressure)
 3. Sandstorm
 4. Precipitation
-

2 (B) Mention the importance of
Barometer:

It is used to measure atmospheric (air) pressure.

3 (A) Put (✓) or (X)

1. X
 2. ✓
 3. X
 4. ✓
-

3 (B) Define

Convection:

It is the transfer of heat in liquids and gases by the movement of warmer less dense particles upward and cooler denser particles downward.

حمل الآن

مجانا وحصريا

المراجعة رقم (6)

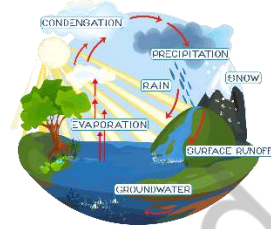
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Concept (3-1)-Energy transfer through water cycle

-How do water, wind and sunlight drive energy transfer in the water cycle?

- The sun is the most important source that drives the water cycle as it provides the energy needed to:
- Melting ice and converts it into liquid water.
- Evaporating liquid water to form water vapor.
- Generating wind movement.



-Energy transfer in the water cycle leads to increasing or decreasing the levels of water in some lakes.

For example, there is a large lake in Turkey:

- This lake hosts huge number of Flamingos when the weather is warm.
- The flamingos feed on algae that found in the shallow water of this lake.



-During summer months, the energy transfer in the water cycle leads to drought of this lake G.R. due to increase in the evaporation rate of the lake water.

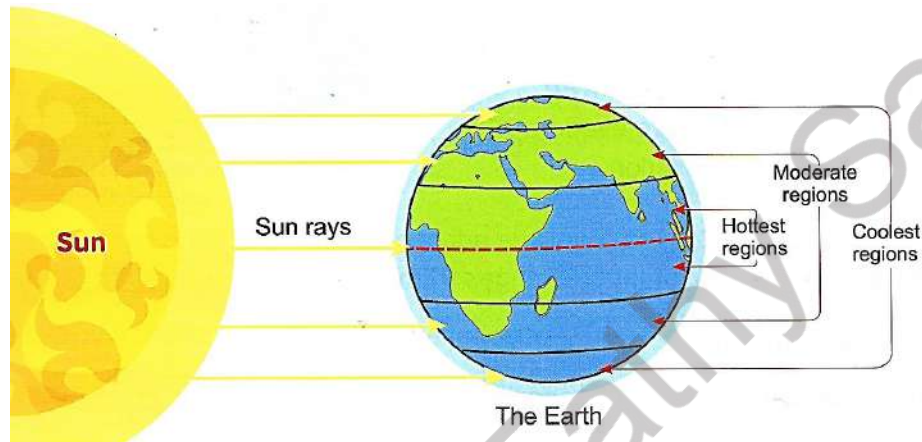
Energy transfer in water cycle

<u>-Evaporation process:</u>	It is the process in which matter changes from liquid state to gas state.	Ex. Shallow lakes dry up when the water evaporates from them.
<u>-Condensation process:</u>	It is the process in which matter changes from gas state to liquid state.	Ex. Formation of fogs over fields in the early morning
<u>Precipitation process:</u>	It is the process in which water falls on Earth in the form of rain, sleet, snow or hail.	Ex. Snow falls in cold days
<u>Runoff:</u>	It is the step in which water flows along the Earth's surface into the river and then into the ocean or sea.	Ex. Water in a river travels down a mountainside.
<u>Collection:</u>	It is the step in which rainwater falling on the Earth's surface is collected in different water bodies.	Ex. Water is collected in oceans, seas and rivers.

Distribution of solar energy:

-Evaporation rate of in the water cycle differs from one region to another on Earth's surface G.R. due to the difference in amount of solar energy that reaches the earth from one region to another.

<u>Hottest Regions</u>	<u>Moderate Regions</u>	<u>Cooler Regions</u>
In which evaporation process is the greatest	In which the evaporation process is moderate	In which evaporation process is smallest.



How solar energy and gravity drive water cycle?

Water cycle: It is the continuous movement of water among different water reservoirs.

Water reservoirs: They are storage locations of water on Earth. e.g. oceans, lakes, seas, rivers, glaciers, soil, rocks, living organisms and atmosphere.

-The main processes and steps that move water among these reservoirs are evaporation, condensation, precipitation, runoff and collection.

-All these processes and steps depend on energy and force.



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The factors that affect the movement of water in water cycle

1-Solar Energy:

The sunlight that comes from sun includes **thermal energy** that causes **the change in state of water through the water cycle:**

Process	Thermal Energy	State changes
Melting	Gains	Solid to liquid
Evaporation	Gains	Liquid to gas
Condensation	Loses	Gas to liquid
Freezing	Loses	Liquid to solid



2-Gravity force:

Water starts to move or change its way of movement when a force affects it.

- Falling of melting** ice and water droplets found in clouds back to the earth's surface, leads to flowing of liquid water downhill into streams and rivers.
- Flowing of water** in solid state in glaciers from **higher** areas to **lower** areas.
- Leakage** of liquid water down into the ground then to ground reservoirs.
- Flowing** of groundwater from **higher** altitude areas to **lower** altitude areas.

Energy and Water cycle

- When water changes from one state to another in **water cycle**, it **gains or loses energy**.
- Gaining or losing energy** affecting water particles in air.
- The **movement** of air from one place to another with difference in temperature leads to evaporation and condensation processes.

Transfer of Energy

- Condensation and freezing** occurs when water particles **lose** thermal energy.
- Melting, evaporation and transpiration** occurs when water particles **gain** thermal energy.



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1-Evaporation:

The sun heats water in water bodies this leads to evaporation of water and changing it into water vapor due to gaining thermal energy.

2-Transpiration:

It is a type of evaporation that takes place through the stomata on the plant's leaves.



-About 10% of water vapor in the air comes from transpiration of plants.

-When the amount of the energy comes from the sun increases, the transpiration rate in plant's leaves increase.

3-Condensation:

When water saturated with water vapor cools due to decreasing of air temperature, the water vapor changing into liquid water forming clouds.



-Clouds are formed G.R due to condensation of water vapor into water droplets attach to particles of dust and smoke so when large numbers of these water droplets joint together they form clouds.

-Water is important for humans, animals and plants G.R. because all living organisms need water to survive.

-The total amount of water on Earth does not change even if water changes from one state to another G.R. because it can be replaced through the water cycle.

Convection: It is the process in which heat transfers in liquids and gases, where hot molecules rise upward, while colder molecules fall down.

-Radiation: It is the heat transfer from sun to the Earth's atmosphere.

-Convection: It is the heat transfer through atmosphere in the form of convection current.

-There is difference in temperature and densities in water of oceans and atmosphere G.R. due to the unequal distribution of heating of land and oceans.



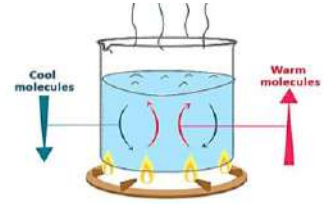
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Convection in liquids and Gases

-When a liquid or gas is heated, it expands and becomes less dense moving upwards.

-While cold liquid or water is denser to it move downwards replacing the warm liquid or water.



Convection currents: It is the movement of warm liquid or gas upward and cold liquid or gas downward forming a cycle.

-Convection current happens G.R. due to the movement of warm air upward and cold air downward.

The force of gravity helps rising and falling of different densities of liquids and gases leading to rotation of convection current forming wind and ocean currents.

The relation between convection and condensation:

Convection causes the rising of temperature of air that contains water vapor and when this rising air loses its heat and cold water vapor changes into water droplets condensation happens forming clouds.

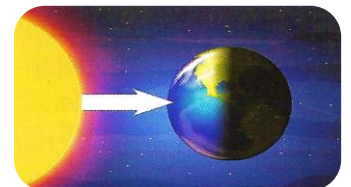
So, condensation happens as a result of convection.

The heating of Earth

-Getting closer to the equator or moving away from it affects the weather G.R. because weather of the areas near the equator is hot and humid while the weather of areas as we move away to north and south of equator depends on the temperature and precipitation as it could be warm and humid or freezing cold.

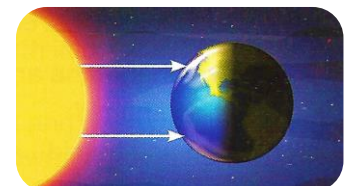
1-When the sun rays fall perpendicular on Earth surface:

The sun rays are concentrated on a small area giving high effect of heat so the weather is hot.



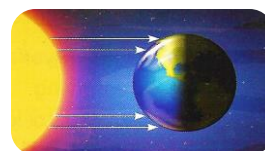
2-When the sun rays fall semi-inclined (semi-slanted) on Earth's surface:

The sun rays are distributed on a large area giving low effect of heat so the weather is warm.

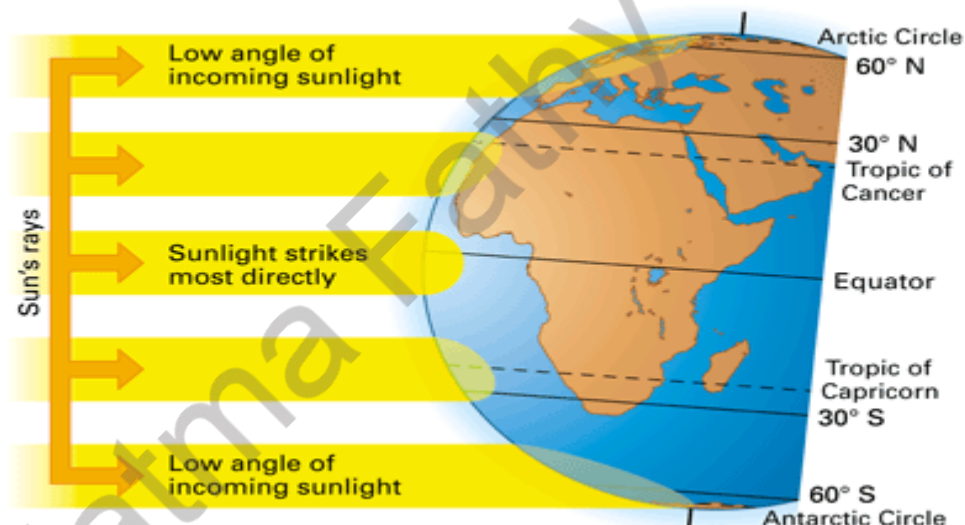


3-When the sun rays fall very inclined (very-slanted) on Earth's surface:

The sun rays are distributed on a very large area giving the lowest effect of heat, so the weather is very cold.



P.O.C	<u>Equator (Hottest)</u>	<u>Moderate</u>	<u>Poles (Coolest)</u>
Evaporation	Greatest	Moderate	Smallest
Temperature	High	Moderate	Low
Air	Humid air	Less humid	No humidity
Sunrays	Perpendicular on Earth surface concentrated in small area	Semi-inclined on earth surface and distributed on large area	Very-inclined on earth surface and distributed on very large area
Description	Hot area	Warm area	Cold



-The areas near equator are very hot regions G.R. Due to that sunrays fall perpendicular on Earth's surface in the area of equator and concentrated on a small area giving high effect of heat and weather become hot.

-When going away from equator to the north or south the temperature gradually decreases G.R. because sunrays fall semi-inclined on Earth's surface in the area at north and south of equator and distributed on large area giving low effect of heat and the weather becomes warm.

-The weather at poles is very cold G.R. because sun rays fall very inclined on Earth's surface in the area far away from the equator and distributed on very large area giving lowest effect of heat and weather becomes very cold.



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Convection currents and water cycle

-Convection currents and gravity force affect the movement of water through water cycle G.R. convection current cause movement of warm water or gas upward and cold liquid or gas downward with the help of gravity force.

Earth's Wind

Global wind system: It is the system that consists of wind blow in a constant direction over long periods of time.

-Global wind affects the weather and climate of an area G.R. because wind is the main factor in determining weather and climate so change in wind cause change in weather and climate of an area.

Factors determining wind direction:

- 1-Amount of solar radiation that reach the Earth.
- 2-Rotation of the Earth.

What would happen if there is no wind on Earth?

- The region around the equator become very hot and the poles will completely freeze.
- Some ecosystems will change.
- Some ecosystems will disappear completely.



Formation of wind:

If the warm air contains enough amount of water vapor during its rising, the water vapor condenses, so the air loses this water in the form of rain.

At the same time, cooler air masses flow from nearby areas to replace the rising warm air.

When the warm air flows away from its place to another one, it cools and descends.

By the time, it reaches the Earth's surface again and it becomes dry.

This dry air forms a group of dry deserts around the Earth.

Then, the air flows back again to the same place.

Concept (3-2)-Heat and Weather Changes

-What are the causes that leads to weather changes?

- Density of cold and dry air is more than hot and humid air.
- Temperature of the air, when a part of air is heated it becomes hot and humid.
- Hot humid air rises up and cold dry air falls down.
- When hot humid air rises up it loses energy and condenses forming clouds.

-How meteorologists predict what the weather will be?

Meteorologists depends on some instruments to collect data and study changes of weather.

Farming the desert

Properties of deserts

Rainfalls	Desert receives the <u>least amount of rain</u> compared to all other biomes
Weather	Extreme hot and dry weather.

-Farmers face a challenge in farming deserts G.R. because the extreme hot and dry weather that causes evaporation of more water than that falls by precipitation.

-Farmers use new ways to make the soil of dry desert fertile and fruitful G.R. because population growth cause people to live in desert.

Improving the soil of desert

Soil	They improve soil quality.
Water	They use new ways to irrigate crops e.g. reusing water.
Crops	They plant crops that are able to grow in the hot climate and low fertility soil.
Energy	They use wind and sun to power their farms in desert with wind turbines and solar energy.



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Weather Changes

Mountain Effects:

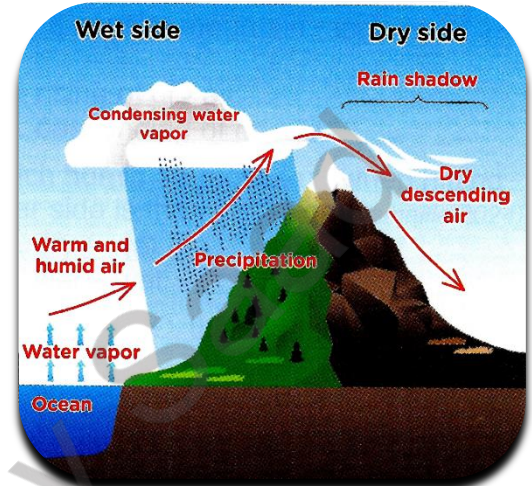
-Mountain ranges at coastal regions have two sides:

1-A wet side: that face coast.

2-A dry side: that is away from the coast.

Rain Shadow Phenomenon

<u>At the wet side</u>	<u>At the dry side</u>
- <u>Warm</u> and humid air <u>ris</u> es and cools.	- <u>Cold</u> air <u>descends</u> and becomes warm.
-Water vapor <u>condenses</u> so the precipitation occurs.	-The <u>warm</u> air <u>dries</u> the land of this side



Changes in the atmosphere

<u>Properties</u>	<u>Bottom of mountain</u>	<u>Top of the mountain</u>
<u>Atmospheric pressure</u>	High	Low
<u>Air temperature</u>	High	Low
<u>Air density</u>	High	Low

Meteorology: The science of predicting weather

Meteorology: It is the science of studying and predicting the weather.

Meteorologist: The scientist who uses a variety of tools and instruments to study and forecast weather.

Steps of weather prediction:

- 1-Collecting data
- 2-Analyzing data
- 3- Putting it all together.



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1-Collecting data

Instruments for prediction of weather conditions

<u>Instrument</u>	<u>Function</u>
Thermometer	Measure temperature.
Barometer	Measure atmospheric pressure
Anemometer	Measure wind speed
Weather radar	Detect the intensity and speed of precipitation and tracks thunderstorms and hurricanes
Rain Gauge	Measure the amount of rain in a certain area.

Atmospheric pressure: It is the weight of the air above a certain area **or** it is the amount of force that air exerts on its surroundings.

-Meteorologists use some tools like satellites, airplanes and weather balloons G.R. to carry measuring instruments high into the atmosphere to measure conditions of weather from different altitudes.

-There are also satellites and weather stations that have devices designed to transmit data from satellite or station to meteorologists.

Humidity: It is the measure of how much water vapor is present in the air.

2-Analyzing the data

-Meteorologists use weather maps to collect data from different places and over short periods of time, so that they can analyze it.

-Mapping data like air temperature, atmospheric pressure and humidity G.R. because it allows meteorologists to see important weather conditions such as air movement and communicate information to other meteorologists and public.



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3-Putting it all together

-Meteorologists need to observe some other factors that affect atmosphere such as landforms.

-Meteorologists use complex computer models G.R. to predict how these different factors will interact.

-Weather forecasting may be uncertain for next days or weeks. G.R. Because:

-Some unexpected changes in wind, air temperature or moisture in air can affect next weeks' weather.

-Sometimes unexpected and quickly changes happen in the weather conditions so meteorologists cannot predict the weather.

The unequal heating of earth:

-There is a change of air temperature above land and water areas on the Earth's surface G.R. because the effect of thermal energy of the sun on land (sand) differs from that on water as sand is heated up and cooled off faster than water.

-Hot air move up while cold air move down G.R.

Because when air is heated, it expands, its molecules spread out away from each other and becomes less dense so it moves upward, while when air is cooled, it contracts, its molecules comes close to each other and becomes denser and it moves down.

-Movement of air depends on its temperature G.R. Because warm air rises up while cold air flows down and replaces the warm air.

<u>Air current</u>	It is the vertical movement of air up and down.
<u>Wind</u>	It is the horizontal movement of air left and right.

-The differences of temperature of areas that are close to each other on earth affect speed of air current, speed of wind and direction of wind movement.

How precipitation occurs:

1-When small water droplets are formed in the clouds, the air hold them up.

2-As water vapor continues to condense, the droplets become bigger and heavier.

3-The gravity pulls these big and heavy water droplets toward the ground so precipitation occurs.



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Floods and Sand Storm

Too much or Too little precipitation causes:

- 1-Damaging of buildings and agricultural systems.
- 2-Injuries and death.
- 3-Extreme weather phenomenon i.e. drought or flooding.



Phenomenon	Drought	Flooding
<u>Definition</u>	-It is the shortage of water that is available for drinking growing crops, farming animals and industry.	It is the increase in the flow of water over the edges of riverbank and onto the land around the river.
<u>Cause</u>	Occurs due to extreme hot temperature .	Occurs due to increase in the rate of rain fall and sudden melting of snow and ice over a region.
<u>Harms</u>	No enough water for people, plants and animals.	

Harms of floods	Advantages of floods
-Damaging of buildings. -Death of people and animals. -harming of economy.	-Some ecosystems depend on periodic floods such as ecosystems along the Nile.

-Flood is more danger if the land around the flood is frozen G.R. because frozen water cannot absorb the water.

Sandstorm (dust storm)

<u>Occurrence</u>	When very strong wind blows up sand or dust or both of them from dry area.
<u>Harms</u>	-Reduce the visibility during driving cars. -Dust accumulates on solar panels. -Dust fills up irrigation canals affecting quality of water. -Dust damages the plane's engine. -Harms the human eyes and respiratory system

-We can easily see sandstorms G.R. because they are extending for several kilometers long and its height may reach hundreds of meters





Second Term

February Exam Revision

-Choose the Correct answer from the following:

1-Both of and processes occur by increasing the absorption of thermal energy.

a-evaporation -transpiration

b-evaporation - freezing

c-condensation - transpiration

d-condensation - freezing

2-Water changes from a state to another when it gains, while water starts to move when a is exerted on it.

a-work - force

b-force - energy

c-work - energy

d-energy - force

3-The next process after condensation of water vapor in the sky as clouds is process.

a-evaporation

b-precipitation

c-collection

d-freezing

4-Moderate regions are areas in which the evaporation process is.....

a-the greatest

b-the smallest

c-moderate

d-absent

5-The air causes the formation of many desert areas around the Earth's surface.

a-cold

b-moistened

c-dry

d-dusty

6-Wind is formed when rises and replaced by that flows from nearby areas.

a-warm air-cold air

b-warm water - cold water

c-cold water - warm water

d-cold air - warm air.

7-Due to convection, air moves upward aboveair.

a-cold - hot

b-hot - cold

c-cold - warm

d-warm - hot

8-When a liquid is heated, it will and become less dense and

a-expand-heavier

b-contract - lighter

c-expand - lighter

d-contract - heavier

9-Melting of snow at the two poles, is due to the thermal energy that comes from the

a-wind

b-moon

c-sun

d-electricity



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10-Both of and processes happen due to the decrease of thermal energy.

a-melting - freezing

b-melting - condensation

c-freezing - condensation

d-melting -evaporation

11-About 10% of the water vapor in air comes from transpiration of

a-humans

b-rocks

c-animals

d-plants

12-Clouds are formed due to process.

a-melting

b-collection

c-condensation

d-freezing

13-Wind helps in transporting water through the water cycle by carrying

a-sand grains

b-small rocks

c-plant leaves

d-water vapor

14-In different biomes, the least amount of rain falls on biomes.

a-rainforest

b-grassland

c-savannah

d-desert

15-Clouds are formed as a result of of water vapor.

a-condensation

b-evaporation

c-freezing

d-melting

16-Coastal mountain ranges often have two sides which are side and side.

a-narrow-wide

b-wet - dry

c-high - low

d-dark - light

17-Freshwater stored underground in the form of groundwater by the effect of

a-condensation

b-electricity

c-gravity

d-evaporation

18-Water vapor in the atmosphere can condense and form

a-air

b-clouds

c-sunlight

d-wind

19-The form of evaporation process that takes place from the leaves of plants is called.....

a-transpiration

b-collection

c-melting

d-freezing

20-The barometer is used to measure.....

a-object's mass

b-object's length

c-air temperature

d-atmospheric pressure

21-The climate is

a-the amount of rain that an area receives only.

b-the state of the wind at a specific place and time only.

c-the air temperature only.

d-the average weather condition over an extended period of time.

22-The temperature may reach more than 50 degrees in Aswan in the summer, this reflects

a-runoff

b-atmosphere

c-rainfall

d-climate



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23-The anemometer is used to measure

a-adaptation b-rainfall c-evaporation d-wind speed

24-..... is the transformation of water vapor into liquid water droplets in the air.

a-Transpiration b-Evaporation c-Condensation d-Melting

25-The thermometer is used to

a-measure the temperature b-know tomorrow's weather
c-predict the time of rainfall d-measure wind speed

26-The evaporation of water from plant leaves is called

a-condensation b-transpiration c-rainfall d-freezing

27-Among the forms of precipitation

a-rain, hail and snow. b-Sun, rain and snow.
c-seas, rivers and oceans d-mountains, valleys and rivers

28-The amount of water vapor in the air is known as

a-humidity b-evaporation
c-condensation d-the cloud

29-Oceans help improve the world's temperature through

a-heat absorption b-nitrogen gas absorption
c-salt storage d-water storage

30-At the tops of mountains, the atmospheric pressure is

a-high b-low
c-equal to the pressure at the foot of mountains d-vanishing

31-Wind is formed when rises and replaced by that flows from nearby areas.

a-warm air - cold air b-warm water - cold water
c-cold water - warm water d-cold air - warm air

32-Floods may occur as a result of and

a-gentle rain - melting of snow b-heavy rain - melting of snow
c-gentle rain - freezing of water d-heavy rain - evaporation of water

33-Heat transfers from the object to the object.

a-big - small b-small - big c-hot - cold d-cold - hot

34-The weather of the areas near the equator is

a-hot and humid b-hot and snowy
c-warm and humid d-warm and snowy

35-All the following are considered as the main processes in transferring water through water reservoirs, except

a-condensation b-collection c-evaporation d-precipitation



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36-At the top of the mountain, the atmospheric pressure is and the temperature is compared to the bottom of the mountain.

a-lower - lower

b-higher - higher

c-lower - higher

d-higher - lower

37-Movement of air can change the state of water from to state by evaporation process.

a-gas - liquid

b-liquid - gas

c-solid - gas

d-solid - liquid

38-Convection is a way of transferring of heat in liquids and gases due to the differences in and

a-mass - color

b-shape - volume

c-temperature - density

d-color - temperature

39-Due to convection air moves upward above air

a-cold - hot

b-hot - cold

c-cold - warm

d-warm - hot

-Put true or false:

1-Sunlight causes the change of water to snow in coolest regions. ()

2-The Large Salt Lake in Turkey dries up when the weather is cooled. ()

3-In hottest regions, the rate of evaporation process is the greatest. ()

4-When rainwater hits the ground, it may flow across the land in the form of evaporation. ()

5-The force of gravity affects the movement of water in the water cycle. ()

7-States of water change when water gains or loses energy. ()

8-In the water cycle, the step that follows condensation process is runoff. ()

9-Hottest regions are regions in which the evaporation process is the greatest. ()

10-Falling of hail in coolest regions is an example of evaporation process. ()

11-Unequal heating of the Earth between the poles and the equator generates wind. ()

12-Wind is caused by the continuous exchange between warm air and cold air. ()

13-Due to radiation currents, warm water moves above cold water. ()

14-Water reservoirs on the Earth include oceans and seas only. ()

15-Glaciers move from the top of mountains to the bottom of mountains due to the effect of gravity. ()

16-Water comes out from stomata to the air in the form of water vapor. ()



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- 17-As a result of low temperature, water returns back into water vapor. ()
- 18-There is no water found in the air around us. ()
- 19-When water vapor cools in the sky, it forms clouds. ()
- 20-The water cycle is a movement of water through different water reservoirs on the Earth. ()
- 21-A meteorologists is a scientist who studies the rocks of Earth. ()
- 22-The cold air is heavier than the hot air. ()
- 23-Farmers may have to reuse water to deal with the problem of water shortage, especially in desert lands. ()
- 24-Meteorologists can be completely sure of future weather conditions. ()
- 25-The temperature at the top of a mountain is less than the temperature at the bottom of this mountain. ()
- 26-The weight of the air above a certain area is known as the atmospheric pressure. ()
- 27-Rain gauge is used to measure the amount of rain. ()
- 28-By decreasing the temperature of air, its density decreases. ()
- 29-The temperatures of both water and sand increase at different rates when they are exposed to the same amount of heat. ()
- 30-Floods have both harms and benefits. ()
- 31-The too much precipitation may cause drought. ()
- 32-Barometers are used to measure the speed of wind. ()
- 33-Cold air rises above hotter air. ()
- 34-Heavy rain may cause flooding. ()
- 35-When the air is cooled, it rises up. ()
- 36-The weather in the area near the equator is very cold due to falling of sun rays perpendicular on Earth's surface. ()
- 37-Precipitation occurs after condensation of water vapor in the sky. ()
- 38-Transferring of energy in the water cycle causes increasing and decreasing of water level in some lakes. ()
- 39-The two factors which control the movement of water in the water cycle are gravity force and solar energy. ()
- 40-The direction of wind is determined by the amount of solar radiation received by the Earth. ()
- 41-Sandstorms blow up from a dry area such as seas and oceans. ()
- 42-The properties of the atmosphere at the top of the mountain and at its bottom are similar. ()



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- 43-When the sun heats the water in a river, the water changes into gas state. ()
- 44-The hand which is put over a lighted candle feels hot because hot air has high density so it moves. up. ()
- 45-Glaciers move from the top of mountains to the bottom of mountains due to the effect of gravity. ()
- 46-Convection currents in Earth's atmosphere help in determining the regional climate. ()
- 47-If the temperature of the sand in a desert is 42°C at noon, its temperature may reach 55°C at night. ()
- 48-Sandstorms decrease the visibility during driving cars. ()

-Complete the following:

- 1-Water changes from solid state to liquid state when it gains
- 2-the increase in the rate of causes the completely drought of the large Salt Lake in Turkey.
- 3-Evaporation of different water bodies on Earth is affected by the distribution of the energy on the Earth's surface.
- 4- Water of oceans and seas thermal energy when it changes into water vapor.
- 5-Formation of large areas of is due to the precipitation of very little rains on these areas.
- 6-In condensation process, water vapor thermal energy and changes again into liquid water.
- 7-When in air hits a cold glass of juice it will condense.
- 8-The amount of energy that reaches the Earth affects the rate of evaporation process in the water cycle.
- 9-Cold water has more than warm water so it moves under the warm water.
- 11-Dry air causes the formation of large areas of around Earth's surface.
- 14-Heat can transfer through the Earth's atmosphere due to the effect of currents.
- 15-Fresh water changes into water vapor when it thermal energy, while fresh water changes into when it loses thermal energy.
- 16-The sun produces the energy which causes the movement of currents that produces ocean currents and



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- 17-The movement of the water through different water reservoirs on the Earth is called
- 18-Transpiration is a form of process, while condensation takes place by the decrease in the energy.
- 19-Drying up of a shallow pond in summer is an example of process.
- 20-When the water droplets in the clouds become too heavy, it causes process.
- 21-Energy of the sun causes the changing of liquid water into by evaporation process.
- 22-The amount of rain that falls on deserts is than that which falls in other biomes.
- 23- Water vapor comes out from plant leaves through the
- 24-When air is heated, it expands as its molecules move each other.
- 25-Due to convection currents, hot air moves cold air.
- 26-When the hot and humid air meet the cold and dry air, the air rises.
- 27-Cold water has more than warm water, so it moves under the warm water.
- 28-The amount of water that evaporates is than the amount of rain that falls on deserts.

-Write the scientific term of each of the following:

- 1-A step after precipitation in which water of rain flows across the land into the river. (.....)
- 2-A structure found on plant leaves responsible for losing water vapor during transpiration process. (.....)
- 3-It is the movement of water amount the various water reservoirs on the Earth. (.....)
- 4-The state of water that is produced when an amount of liquid water gains a big amount of thermal energy. (.....)
- 5-It is the process in which water changes from gas state to liquid state. (.....)
- 6-It is the step in which rainwater falling on the Earth's surface is collected in different water bodies. (.....)
- 7-It is formed from millions of tiny water droplets which are condensed from water vapor in the sky. (.....)
- 8-It is the process in which water falls on Earth in the form of rain, sleet, snow or hail. (.....)



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- 9-It is the process in which matter change from liquid to gas state.
(.....)
- 10-The force which causes moving down of water from higher place to a lower place on the Earth. (.....)
- 11-Large areas of land which are formed due to the effect of dry air.
(.....)
- 12-It is the main source which is responsible for warming air and forming wind.
(.....)
- 13-It is the caused when air warmed by the solar radiation rises and then replaced by cooler air that flows from nearby areas. (.....)
- 14-It is the method by which heat transfers within liquids and gases, where hot molecules rise upward, while colder molecules fall down.
(.....)
- 15-It is the method by which heat of the sun transfers from the space to Earth's atmosphere. (.....)
- 16-They are the places of storing water on the Earth. (.....)
- 17-A force that the atmospheric air exerts on a certain area of the Earth's surface. (.....)
- 18-It is the measure of how much water vapor is present in the air.
(.....)
- 19-A type of balloon that contains measuring instruments and that is sent into the air to find out information about weather. (.....)
- 20-The science that studies the weather conditions. (.....)
- 21-It is the weight of air above an area. (.....)
- 22-They are the places of storing water on the Earth. (.....)
- 23-A scientist who studies the Earth's atmosphere and forecasts the weather.
(.....)
- 24-A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail. (.....)
- 25-It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. (.....)
- 26-It is the process which helps in formation of clouds in the sky.
(.....)
- 27-A side of mountain ranges at coastal regions that faces the coast.
(.....)



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28-They cycle that involves the continuous movement of water from different water bodies to the atmosphere then falling back to the Earth in the form of rain, sleet or snow. (.....)

-Give a reason for the following:

1-Drying up of a shallow lake in summer season.

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.....

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2-In a sunny day, a part of ice found on the top of a mountain will change into liquid water.

.....

.....

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3-The weather in the area far away from the equator is very cold.

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4-When cold air is warmed by the solar energy, it raises upward.

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5-hot air moves upward above cold air.

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6-On adding warm water to cold water without shaking, the warm water stay above cold water without mixing.

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7-The formation of wind is determined by the amount of solar radiation received by Earth.

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8-Formation of fog in the early morning.

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9-Changing of water from one state to another.

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10-Moving down of glaciers from the top of a mountain to its foot.

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11-A bout 10% of water vapor in air comes from plant.

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12-Formation of clouds in the sky.

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13-The weather in the area near the equator is hot.

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14-The effect of heat is low in the area at the north and south of the equator.

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15-Changing of some amount of water in water bodies into water vapor.

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16-Desert farming faces many difficulties.

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17-Sometimes people prefer to live in desert land instead of cities.

18-At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.

19-When air is heated, it expands.

20-Extreme weather became stronger in many places around the world.

21-Floods have some benefits.

22-Sandstorms have harmful effects on human health.

-What happens if:

1-Water in a lake is exposed to solar radiation for a long period of time.

2-Water vapor in the sky loses a big amount of thermal energy.



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3-The temperature of air increases in an area.

4-You cover some leaves in a plant with a plastic bag then leave the plant in the direct sunlight for a while.

5-There is no wind on Earth.

6- Water of seas and oceans gains a big amount of thermal energy.

7-Moist air touches a cold bottle of water.

8-Water vapor in air condenses in the sky.

9-The water droplets in the clouds become very heavy.

What happens to:

1-The level of water in a lake when the rate of evaporation increases.



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2-The snow when sunlight falls on it.

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3-The weather if the sun rays fall very inclined on an area.

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4-The density of air if the cold air is warmed by the effect of solar energy.

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5-The movement of air when solar radiation heats up the air in an area.

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6-The atmospheric pressure, as we move up toward the top of a mountain.

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7-Air density, as we move down toward the bottom of a mountain.

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8-The temperature of water inside a beaker if we put it under a lighted lamp for few minutes.

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9-The temperature of desert sand at night.

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10-We boil water in a pot on the stove. (concerning the movement of hot water and cold water)

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11-Buildings when they are subjected to strong floods.

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12-Solar panels when dust accumulates on them.

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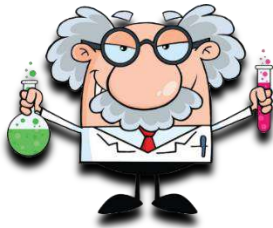
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Second Term

February Exam Revision



-Choose the Correct answer from the following:

1-Both of and processes occur by increasing the absorption of thermal energy.

a-evaporation -transpiration

b-evaporation - freezing

c-condensation - transpiration

d-condensation - freezing

2-Water changes from a state to another when it gains, while water starts to move when a is exerted on it.

a-work - force

b-force - energy

c-work - energy

d-energy - force

3-The next process after condensation of water vapor in the sky as clouds is process.

a-evaporation

b-precipitation

c-collection

d-freezing

4-Moderate regions are areas in which the evaporation process is.....

a-the greatest

b-the smallest

c-moderate

d-absent

5-The air causes the formation of many desert areas around the Earth's surface.

a-cold

b-moistened

c-dry

d-dusty

6-Wind is formed when rises and replaced by that flows from nearby areas.

a-warm air-cold air

b-warm water - cold water

c-cold water - warm water

d-cold air - warm air.

7-Due to convection, air moves upward aboveair.

a-cold - hot

b-hot - cold

c-cold - warm

d-warm - hot

8-When a liquid is heated, it will and become less dense and

a-expand-heavier

b-contract - lighter

c-expand - lighter

d-contract - heavier

9-Melting of snow at the two poles, is due to the thermal energy that comes from the

a-wind

b-moon

c-sun

d-electricity



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10-Both of and processes happen due to the decrease of thermal energy.

a-melting - freezing

b-melting - condensation

c-freezing - condensation

d-melting -evaporation

11-About 10% of the water vapor in air comes from transpiration of

a-humans

b-rocks

c-animals

d-plants

12-Clouds are formed due to process.

a-melting

b-collection

c-condensation

d-freezing

13-Wind helps in transporting water through the water cycle by carrying

a-sand grains

b-small rocks

c-plant leaves

d-water vapor

14-In different biomes, the least amount of rain falls on biomes.

a-rainforest

b-grassland

c-savannah

d-desert

15-Clouds are formed as a result of of water vapor.

a-condensation

b-evaporation

c-freezing

d-melting

16-Coastal mountain ranges often have two sides which are side and side.

a-narrow-wide

b-wet - dry

c-high - low

d-dark - light

17-Freshwater stored underground in the form of groundwater by the effect of

a-condensation

b-electricity

c-gravity

d-evaporation

18-Water vapor in the atmosphere can condense and form

a-air

b-clouds

c-sunlight

d-wind

19-The form of evaporation process that takes place from the leaves of plants is called.....

a-transpiration

b-collection

c-melting

d-freezing

20-The barometer is used to measure.....

a-object's mass

b-object's length

c-air temperature

d-atmospheric pressure

21-The climate is

a-the amount of rain that an area receives only.

b-the state of the wind at a specific place and time only.

c-the air temperature only.

d-the average weather condition over an extended period of time.

22-The temperature may reach more than 50 degrees in Aswan in the summer, this reflects

a-runoff

b-atmosphere

c-rainfall

d-climate

23-The anemometer is used to measure

a-adaptation b-rainfall c-evaporation **d-wind speed**

24-..... is the transformation of water vapor into liquid water droplets in the air.

a-Transpiration b-Evaporation **c-Condensation** d-Melting

25-The thermometer is used to

a-measure the temperature b-know tomorrow's weather
c-predict the time of rainfall d-measure wind speed

26-The evaporation of water from plant leaves is called

a-condensation **b-transpiration** c-rainfall d-freezing

27-Among the forms of precipitation

a-rain, hail and snow. b-Sun, rain and snow.

c-seas, rivers and oceans d-mountains, valleys and rivers

28-The amount of water vapor in the air is known as

a-humidity b-evaporation
c-condensation d-the cloud

29-Oceans help improve the world's temperature through

a-heat absorption b-nitrogen gas absorption
c-salt storage d-water storage

30-At the tops of mountains, the atmospheric pressure is

a-high **b-low**
c-equal to the pressure at the foot of mountains d-vanishing

31-Wind is formed when rises and replaced by that flows from nearby areas.

a-warm air - cold air b-warm water - cold water
c-cold water - warm water d-cold air - warm air

32-Floods may occur as a result of and

a-gentle rain - melting of snow **b-heavy rain - melting of snow**
c-gentle rain - freezing of water d-heavy rain - evaporation of water

33-Heat transfers from the object to the object.

a-big - small b-small - big **c-hot - cold** d-cold - hot

34-The weather of the areas near the equator is

a-hot and humid b-hot and snowy
c-warm and humid d-warm and snowy



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35-All the following are considered as the main processes in transferring water through water reservoirs, except

a-condensation **b-collection** c-evaporation d-precipitation

36-At the top of the mountain, the atmospheric pressure is and the temperature is compared to the bottom of the mountain.

a-lower - lower b-higher - higher
c-lower - higher d-higher - lower

37-Movement of air can change the state of water from to state by evaporation process.

a-gas - liquid **b-liquid - gas** c-solid - gas d-solid - liquid

38-Convection is a way of transferring of heat in liquids and gases due to the differences in and

a-mass - color b-shape - volume
c-temperature - density d-color - temperature

39-Due to convection air moves upward above air

a-cold - hot **b-hot - cold** c-cold - warm d-warm - hot

-Put true or false:

1-Sunlight causes the change of **water to snow** in coolest regions. (X)

2-The Large Salt Lake in Turkey dries up when the weather is **cooled**. (X)

3-In hottest regions, the rate of evaporation process is the greatest. (✓)

4-When rainwater hits the ground, it may flow across the land in the form of **evaporation**. (X)

5-The force of gravity affects the movement of water in the water cycle. (✓)

7-States of water change when water gains or loses energy. (✓)

8-In the water cycle, the step that follows condensation process is **runoff**. (X)

9-Hottest regions are regions in which the evaporation process is the greatest. (✓)

10-Falling of hail in coolest regions is an example of **evaporation** process. (X)

11-Unequal heating of the Earth between the poles and the equator generates wind. (✓)

12-Wind is caused by the continuous exchange between warm air and cold air. (✓)

13-Due to **radiation** currents, warm water moves above cold water. (X)

14-Water reservoirs on the Earth include oceans and seas **only**. (X)

15-Glaciers move from the top of mountains to the bottom of mountains due to the effect of gravity. (✓)



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- 16-Water comes out from stomata to the air in the form of water vapor. (✓)
- 17-As a result of low temperature, **water** returns back into **water vapor**. (✗)
- 18-There is **no** water found in the air around us. (✗)
- 19-When water vapor cools in the sky, it forms clouds. (✓)
- 20-The water cycle is a movement of water through different water reservoirs on the Earth. (✓)
- 21-A meteorologists is a scientist who studies the **rocks** of Earth. (✗)
- 22-The cold air is heavier than the hot air. (✓)
- 23-Farmers may have to reuse water to deal with the problem of water shortage, especially in desert lands. (✓)
- 24-Meteorologists can be **completely sure** of future weather conditions. (✗)
- 25-The temperature at the top of a mountain is less than the temperature at the bottom of this mountain. (✓)
- 26-The weight of the air above a certain area is known as the atmospheric pressure. (✓)
- 27-Rain gauge is used to measure the amount of rain. (✓)
- 28-By decreasing the temperature of air, its density decreases. (✓)
- 29-The temperatures of both water and sand increase at different rates when they are exposed to the same amount of heat. (✓)
- 30-Floods have both harms and benefits. (✓)
- 31-The too much precipitation may cause **drought**. (✗)
- 32-Barometers are used to measure the **speed of wind**. (✗)
- 33-**Cold** air rises above **hotter** air. (✗)
- 34-Heavy rain may cause flooding. (✓)
- 35-When the air is cooled, it **rises up**. (✗)
- 36-The weather in the area near the equator is **very cold** due to falling of sunrays perpendicular on Earth's surface. (✗)
- 37-Precipitation occurs after condensation of water vapor in the sky. (✓)
- 38-Transferring of energy in the water cycle causes increasing and decreasing of water level in some lakes. (✓)
- 39-The two factors which control the movement of water in the water cycle are gravity force and solar energy. (✓)
- 40-The direction of wind is determined by the amount of solar radiation received by the Earth. (✓)
- 41-Sandstorms blow up from a dry area such as **seas and oceans**. (✗)



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42-The properties of the atmosphere at the top of the mountain and at its bottom are **similar**. (X)

43-When the sun heats the water in a river, the water changes into gas state. (✓)

44-The hand which is put over a lighted candle feels hot because hot air has **high density** so it moves up. (X)

45-Glaciers move from the top of mountains to the bottom of mountains due to the effect of gravity. (✓)

46-Convection currents in Earth's atmosphere help in determining the regional climate. (✓)

47-If the temperature of the sand in a desert is 42° C at noon, its temperature may reach **55° C** at night. (X)

48-Sandstorms decrease the visibility during driving cars. (✓)

-Complete the following:

1-Water changes from solid state to liquid state when it gains **thermal energy**

2-the increase in the rate of **evaporation** causes the completely drought of the large Salt Lake in Turkey.

3-Evaporation of different water bodies on Earth is affected by the distribution of the **solar energy** on the Earth's surface.

4- Water of oceans and seas **gains** thermal energy when it changes into water vapor.

5-Formation of large areas of **deserts** is due to the precipitation of very little rains on these areas.

6-In condensation process, water vapor **loses** thermal energy and changes again into liquid water.

7-When **water vapor** in air hits a cold glass of juice it will condense.

8-The amount of **solar** energy that reaches the Earth affects the rate of evaporation process in the water cycle.

9-Cold water has more **density** than warm water so it moves under the warm water.

10-Dry air causes the formation of large areas of **deserts** around Earth's surface.

11-Heat can transfer through the Earth's atmosphere due to the effect of **convection** currents.



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- 12-Fresh water changes into water vapor when it gains thermal energy, while fresh water changes into solid (ice) when it loses thermal energy.
- 13-The sun produces the energy which causes the movement of convection currents that produces ocean currents and wind
- 14-The movement of the water through different water reservoirs on the Earth is called water cycle.
- 15-Transpiration is a form of evaporation process, while condensation takes place by the decrease in the thermal energy.
- 16-Drying up of a shallow pond in summer is an example of evaporation process.
- 17-When the water droplets in the clouds become too heavy, it causes precipitation process.
- 18-Energy of the sun causes the changing of liquid water into water vapor by evaporation process.
- 19-The amount of rain that falls on deserts is less than that which falls in other biomes.
- 20- Water vapor comes out from plant leaves through the transpiration
- 21-When air is heated, it expands as its molecules move away from each other.
- 22-Due to convection currents, hot air moves above cold air.
- 23-When the hot and humid air meet the cold and dry air, the hot air rises.
- 24-Cold water has more density than warm water, so it moves under the warm water.
- 25-The amount of water that evaporates is more than the amount of rain that falls on deserts.

-Write the scientific term of each of the following:

- 1-A step after precipitation in which water of rain flows across the land into the river. (Run off)
- 2-A structure found on plant leaves responsible for losing water vapor during transpiration process. (Stomata)
- 3-It is the movement of water amount the various water reservoirs on the Earth. (Water cycle)
- 4-The state of water that is produced when an amount of liquid water gains a big amount of thermal energy. (Water vapor)
- 5-It is the process in which water changes from gas state to liquid state. (condensation)



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- 6-It is the step in which rainwater falling on the Earth's surface is collected in different water bodies. ([collection](#))
- 7-It is formed from millions of tiny water droplets which are condensed from water vapor in the sky. ([clouds](#))
- 8-It is the process in which water falls on Earth in the form of rain, sleet, snow or hail. ([precipitation](#))
- 9-It is the process in which matter change from liquid to gas state. ([evaporation](#))
- 10-The force which causes moving down of water from higher place to a lower place on the Earth. ([gravity](#))
- 11-Large areas of land which are formed due to the effect of dry air. ([deserts](#))
- 12-It is the main source which is responsible for warming air and forming wind. ([The sun](#))
- 13-It is the caused when air warmed by the solar radiation rises and then replaced by cooler air that flows from nearby areas. ([wind](#))
- 14-It is the method by which heat transfers within liquids and gases, where hot molecules rise upward, while colder molecules fall down. ([Convection](#))
- 15-It is the method by which heat of the sun transfers from the space to Earth's atmosphere. ([Radiation](#))
- 16-They are the places of storing water on the Earth. ([water reservoirs](#))
- 17-A force that the atmospheric air exerts on a certain area of the Earth's surface. ([atmospheric pressure](#))
- 18-It is the measure of how much water vapor is present in the air. ([Humidity](#))
- 19-A type of balloon that contains measuring instruments and that is sent into the air to find out information about weather. ([Weather balloon](#))
- 20-The science that studies the weather conditions. ([meteorology](#))
- 21-It is the weight of air above an area. ([atmospheric pressure](#))
- 22-They are the places of storing water on the Earth. ([water reservoirs](#))
- 23-A scientist who studies the Earth's atmosphere and forecasts the weather. ([meteorologist](#))
- 24-A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail. ([precipitation](#))
- 25-It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. ([Flooding](#))
- 26-It is the process which helps in formation of clouds in the sky. ([condensation](#))



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27-A side of mountain ranges at coastal regions that faces the coast. (Wet side)

28-They cycle that involves the continuous movement of water from different water bodies to the atmosphere then falling back to the Earth in the form of rain, sleet or snow. (water cycle)

-Give a reason for the following:

1-Drying up of a shallow lake in summer season.

Due to the increase in the evaporation of the lake water.

2-In a sunny day, a part of ice found on the top of a mountain will change into liquid water.

Because ice gains thermal energy, so it melts and changes into liquid water.

3-The weather in the area far away from the equator is very cold.

Because the sun rays fall very inclined on Earth's surface in this area, distributed on very large area and giving the lowest effect of heat.

4-When cold air is warmed by the solar energy, it raises upward.

Due to decrease in the density of air when it is warmed as a result of convection.

5-Hot air moves upward above cold air.

Due to the effect convection, where hot air has less density, so it rises upward, while cold air has more density so it falls down.

6-On adding warm water to cold water without shaking, the warm water stays above cold water without mixing.

Due to the effect of convection, as warm water has less density than cold water, so warm water will stay above cold water.

7-The formation of wind is determined by the amount of solar radiation received by Earth.

Because warm air rises upward when it is heated by solar radiation and it is replaced by cooler air that flows from nearby areas.

8-Formation of fog in the early morning.

Due to condensation of water vapor that is found in the air.

9-Changing of water from one state to another.

Due to gaining or losing of thermal energy.

10-Moving down of glaciers from the top of a mountain to its foot.

Due to the effect of gravity on glaciers.

11-A bout 10% of water vapor in air comes from plant.

Due to transpiration process which happens by plants.



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12-Formation of clouds in the sky.

Due to condensation of water vapor into water droplets that attach to particles of dust or smoke in the air.

13-The weather in the area near the equator is hot.

Because the sun rays fall perpendicular on Earth's surface, concentrated in very small area and giving high effect of heat.

14-The effect of heat is low in the area at the north and south of the equator.

Because the sun rays fall semi-inclined on Earth's surface of these areas, distributed in large area giving low heat effect, so the weather is warm.

15-Changing of some amount of water in water bodies into water vapor.

Due to evaporation process, as a result of gaining of thermal energy.

16-Desert farming faces many difficulties.

Because the desert's climate is hot and the amount of water is small.

17-Sometimes people prefer to live in desert land instead of cities.

Due to the fast population growth in cities.

18-At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.

Because sand is heated up faster than water.

19-When air is heated, it expands.

Because the molecules of air move away from each other.

20-Extreme weather became stronger in many places around the world.

Due to global climate change.

21-Floods have some benefits.

Because some ecosystems depend on floods such as ecosystems along the Nile.

22-Sandstorms have harmful effects on human health.

Because sandstorm harm the human eyes and respiratory system.

-What happens if:

1-Water in a lake is exposed to solar radiation for a long period of time.

The water in the lake will evaporate and this lake becomes dry.

2-Water vapor in the sky loses a big amount of thermal energy.

Water vapor condenses forming clouds.

3-The temperature of air increases in an area.

The density of air will decrease so the air will move upward.



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4-You cover some leaves in a plant with a plastic bag then leave the plant in the direct sunlight for a while.

Water droplets will be formed inside the bag.

5-There is no wind on Earth.

The regions around the equator become extremely hot and the poles will completely freeze.

6- Water of seas and oceans gains a big amount of thermal energy.

Water of seas and oceans changes into water vapor in air.

7-Moist air touches a cold bottle of water.

Water vapor which is found in air condenses on the surface of the bottle.

8-Water vapor in air condenses in the sky.

Clouds are formed in the sky.

9-The water droplets in the clouds become very heavy.

Precipitation is formed

What happens to:

1-The level of water in a lake when the rate of evaporation increases.

The level of water will decrease.

2-The snow when sunlight falls on it.

The snow will melt and change into liquid water.

3-The weather if the sun rays fall very inclined on an area.

The weather of this area becomes very cold.

4-The density of air if the cold air is warmed by the effect of solar energy.

The density of the air will decrease.

5-The movement of air when solar radiation heats up the air in an area.

The air will move upward in this area.

6-The atmospheric pressure, as we move up toward the top of a mountain.

The atmospheric pressure decreases.

7-Air density, as we move down toward the bottom of a mountain.

Air density will increase.

8-The temperature of water inside a beaker if we put it under a lighted lamp for few minutes.

The temperature of water will increase.

9-The temperature of desert sand at night.

The temperature of a desert sand will decrease.



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10-We boil water in a pot on the stove. (concerning the movement of hot water and cold water)

Hot water moves up and cold water falls down.

11-Buildings when they are subjected to strong floods.

They may be damaged by moving or breaking them.

12-Solar panels when dust accumulates on them.

Solar panels stop generating energy.

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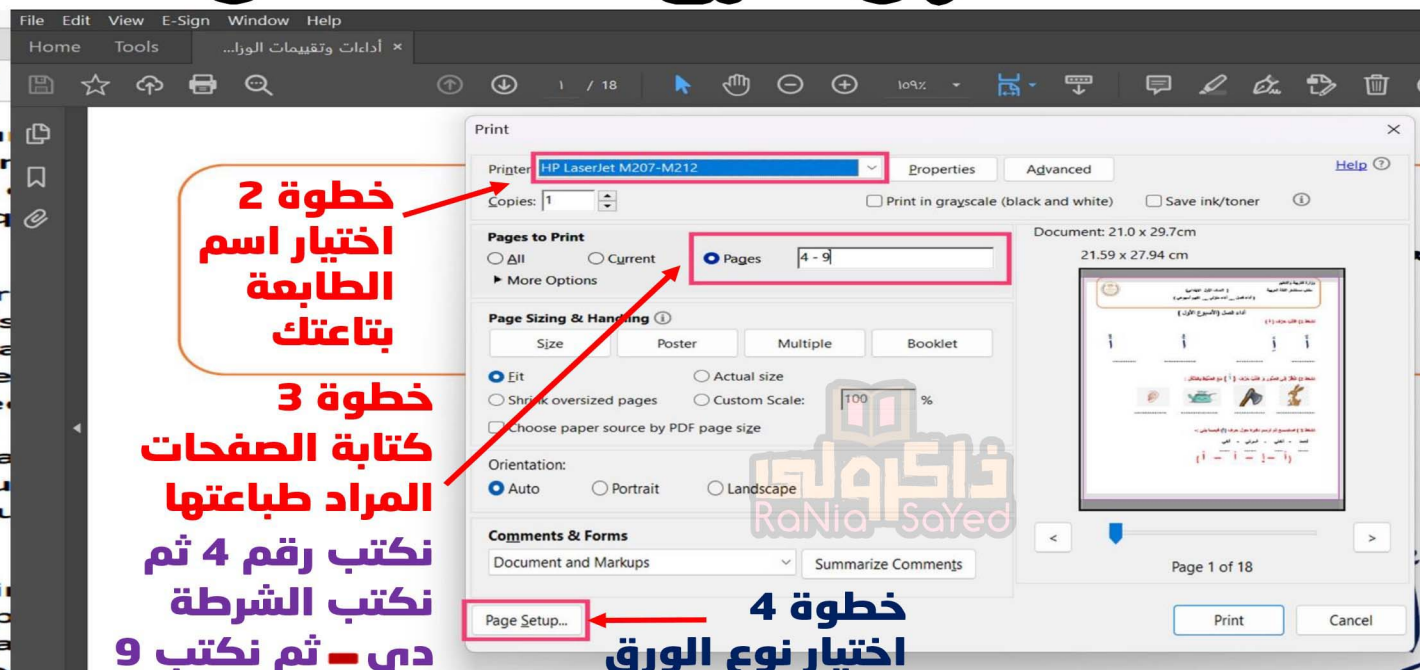
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كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



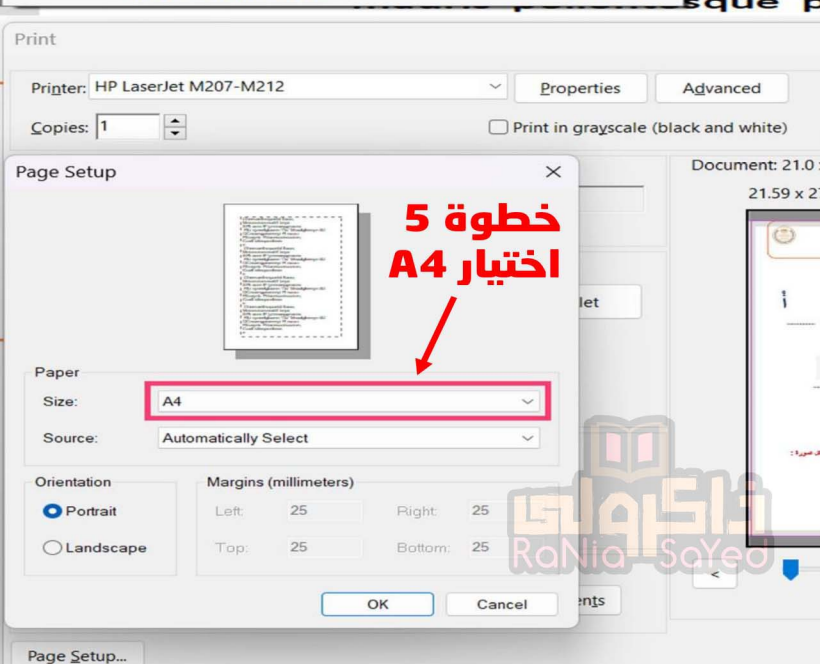
خطوة 1



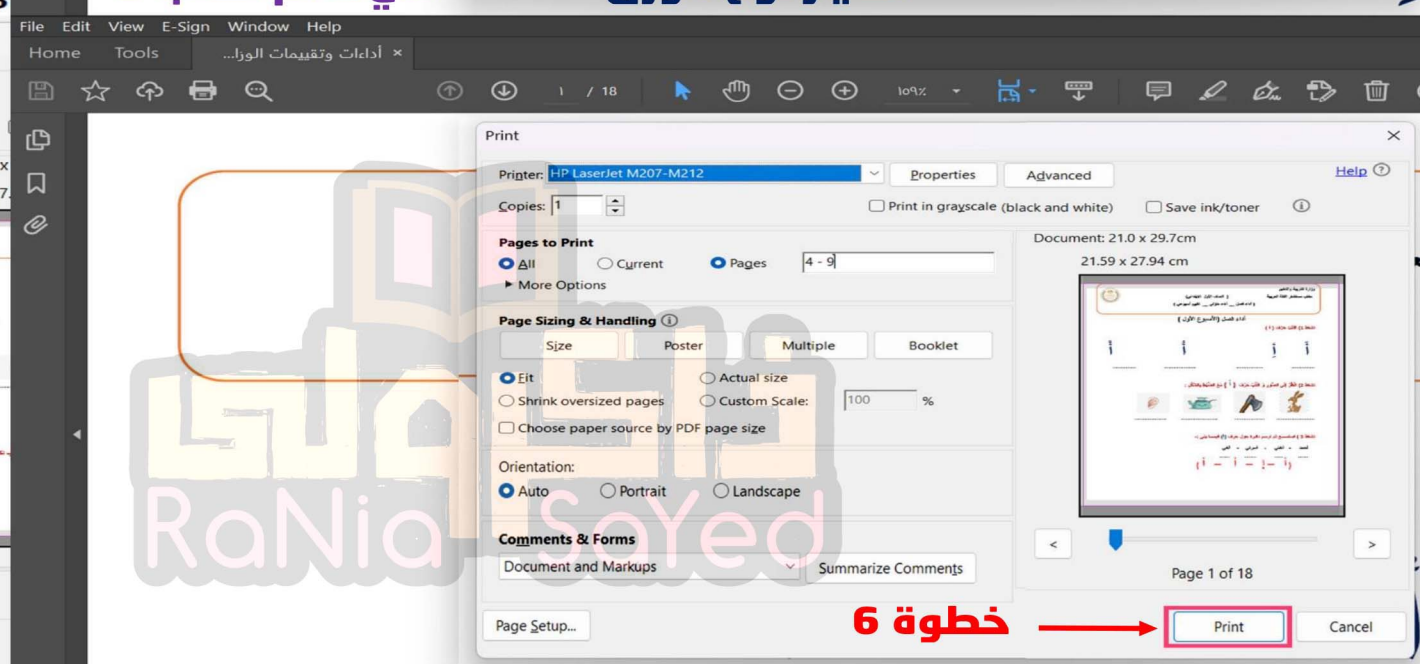
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6